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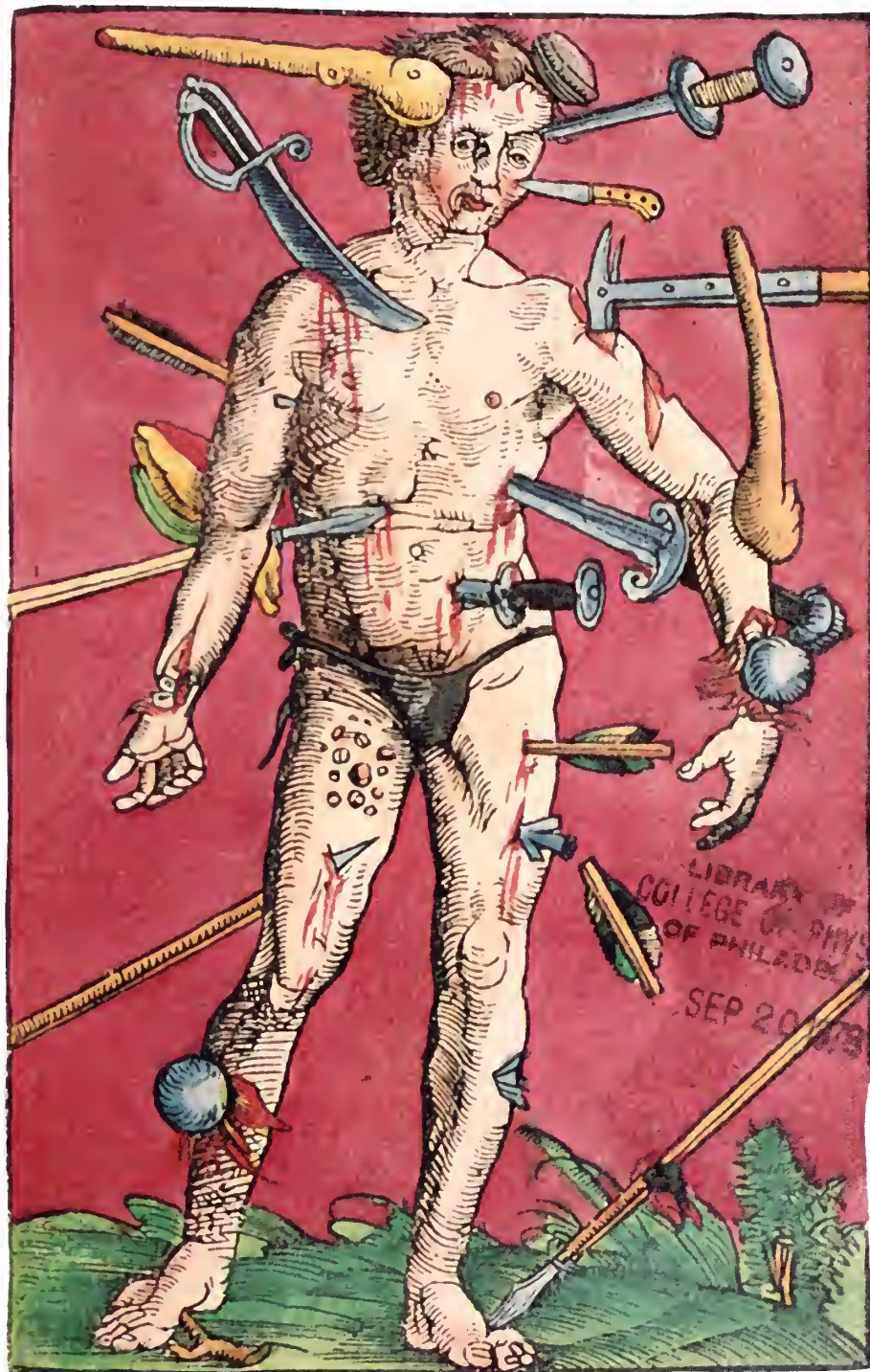
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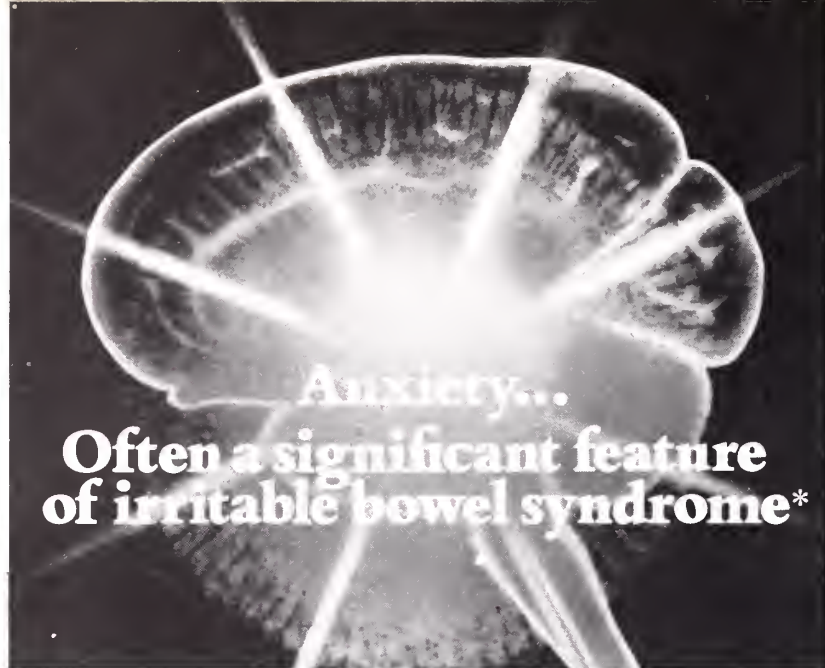
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Malpractice:
'Us or Them'
Page 2

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"Possibly" effective as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis

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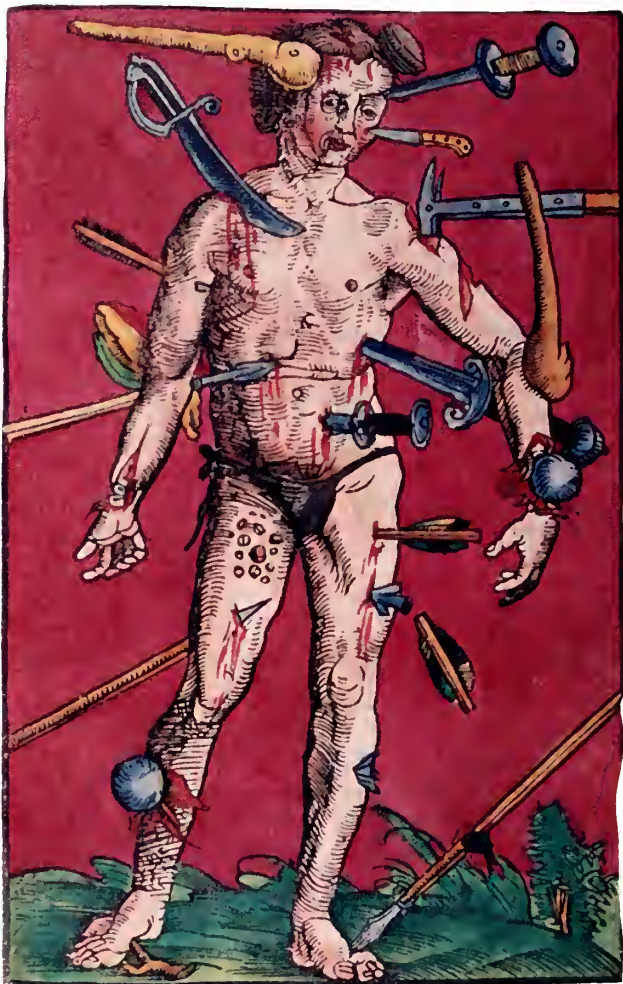
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APR 10 1980



Malpractice: Us Or Them

'The Slings and

Nobody can be sure when the malpractice crisis of the last quarter of the 20th century really began. But it may have had its roots in the 15th century, when Gutenberg invented the printing press and the marvels of medicine began to be broadcast to the masses.

The physician who attended the warriors of that age, whose injuries are depicted in this 1517 woodcut, had little to fear from suits by disgruntled patients, who were lucky enough to survive at all.

If a physician of centuries ago cauterized an arrow wound, the patient understood his chances were slim. The doctor was not a guarantor of good results when he relieved a depressed head wound, or managed a fracture.

But as the centuries passed and medical miracles increased in number, patients began to expect more and more. They began to expect and even demand miracles every time. The image of the physician as infallible, or expected to be, was the creation not so much of doctors themselves as of the popular press.

Thus the flood of words in the cheap, mass produced literature of the 20th century (and, later, television) began to place the doctor under a burden to deliver without fail, regardless of the extent of the injury or illness.

All the while, a parallel evolution occurred in law. The old common law doctrine of *caveat emptor* ("let the buyer beware," placing the burden on the consumer to shop wisely) began to be eroded. Since the turn of this



'Arrows of Outrageous Fortune...'

century, there has been a gradual shift—in fact, a reversal—from *caveat emptor* to *caveat fabricator*—from “let the buyer beware” to “let the maker beware,” in the words of a leading consumer magazine for July 1978.

Product safety suits have proliferated in the last decade, simultaneously with the malpractice suit phenomenon and predicted on much the same reasoning—the maker, or vendor, or provider, was under a new burden to guarantee good results.

Huge verdicts resulted and underwriters panicked. Malpractice insurers quit entirely. But the ill wind blew good, as physician-owned insurance companies were formed over the country. By sheer necessity, physicians were forced to do what, some argue, they should have been doing all along—insuring their profession, even as they controlled and disciplined it.

Taken against the background of other threats to medicine, it became literally us or them, and remains so. Mutual Assurance Society of Alabama, formed two years ago to meet the emergency, may well be the best in the country, the most efficiently run and economically managed. By every outside assessment, it is a viable, permanent structure.

Soon you will be receiving an important communication from officials of the Association. It will be identified by a color reproduction of the “us or them” cover of this Journal. Take time to read it and urge your colleagues to do the same. □



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William L. Smith, M.D., Montgomery

ASSISTANT EDITOR

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ABOUT THE COVER

When Gutenberg made the printing press a reality in the 15th century with his invention of moveable type, medical books were among the first to be printed. The cover is a woodcut from the work, *Feldtbuch der Wundtartzney*, by Hans von Gersdoff, published in Strassburg in 1517. It is from the incunabula of medicine at the Reynolds Historical Library, Birmingham. The woodcut is known to bibliophiles as the "wounded man," but seems also to apply to the harassed, hounded and hectored position of U.S. physicians today in the last quarter of the 20th Century, giving rise to colloquial renaming of it as "us or them."

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* **INDICATIONS:** Based on a review of this preparation by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: **Possibly effective:** In cutaneous candidiasis; superficial bacterial infections; the following conditions when complicated by candidal and/or bacterial infection: otitis, eczematoid, stasis, nummular, contact, or seborrheic dermatitis, neurodermatitis, and dermatitis venenosa; infantile eczema; lichen simplex chronicus; and pruritus ani and pruritus vulvae.
Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Viral diseases of the skin (such as varicella and herpes); fungal lesions of the skin except candidiasis; history of hypersensitivity to any product component. Not intended for ophthalmic use; should not be applied in the external auditory canal of patients with perforated eardrums; should not be used when circulation is markedly impaired.

WARNINGS: Because of the potential hazard of nephrotoxicity and ototoxicity, prolonged use or use of large amounts of this product should be avoided in the treatment of skin infections following extensive burns, trophic ulceration, and other conditions where absorption of neomycin is possible.

Usage in Pregnancy: Although topical steroids have not been reported to have an adverse effect on the fetus, the safety of topical

steroids during pregnancy has not been absolutely established; therefore, do not use extensively on pregnant patients, in large amounts, or for prolonged periods.

PRECAUTIONS: Watch constantly for overgrowth of nonsusceptible organisms (including fungi other than candida). Should superinfection due to nonsusceptible organisms occur, administer suitable concomitant antimicrobial therapy; if favorable response is not prompt, discontinue the preparation until adequate control by other antifungatives is effected. If extensive areas are treated or if the occlusive technique is used, the possibility exists of increased systemic absorption of the corticosteroid; suitable precautions should be taken. If irritation develops, discontinue the product and institute appropriate therapy.

ADVERSE REACTIONS: Sensitivity reactions to topical use of gramicidin are rare. Hypersensitivity to nystatin is extremely uncommon. Hypersensitivity to neomycin has been reported and articles in the current medical literature indicate an increase in its prevalence.

The following local adverse reactions have been reported with topical corticosteroids either with or without occlusive dressings: burning sensations, itching, irritation, dryness, folliculitis, secondary infection, skin atrophy, striae, miliaria, hypertrichosis, acneiform eruptions, maceration of the skin, and hypopigmentation. Contact sensitivity to a particular dressing material or adhesive may occur occasionally. Ototoxicity and nephrotoxicity have been reported.

For full prescribing information, consult package insert.

HOW SUPPLIED: Available in 15, 30, and 60 g. tubes. It is also available in jars of 120 g. (4 oz.) for hospital or institutional use only.

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PRESIDENT'S MESSAGE

Push Comes To Shove

Hiliary H. Henderson, Jr., M.D.
President



Everywhere you look these days there are more and more signs that physicians must become involved if they are to have a chance to save their profession.

There are more federal proposals now than in the last two years. Among these, for example, is a U.S. Senate bill relating to health planning that would require a certificate of need for major purchases for doctors' offices. Major purchases are now defined as those in excess of \$150,000.

A proposed modification to that bill, the Huddleston-Hatch Amendment, would have made the CON requirement for physicians' offices optional with the states. As you know, CON is really a government permit to buy something.

MASA wired Senators John Sparkman and Maryan Allen for their support for the amendment, with Sen. Allen responding by joining as co-sponsor of the amendment. It was narrowly defeated, 47 - 45, July 27, when the Senate passed S 2410, which extends CON to doctors' offices. At this writing, the House had not acted.

In St. Louis in June, the House of Delegates had before it 48 recommendations by the National Commission on the Cost of Medical Care. The Commission had said in Recommendation 19 that certificates of need should be extended to doctors' offices.

The House of Delegates refused to endorse this recommendation, reaffirming opposition, at all levels of government, to extension of CON to private physicians' offices.

We are not out of the woods on this matter yet, and the forests ahead of us are thick and dark. That is one reason, among many, that Alabama physicians should plan now to attend MASA's annual Washington meeting with the Alabama congressional delegation Feb. 4, 1979.

The first of those meetings early this year was enthusiastically acclaimed by the Alabama doctors who made the trip, their wives, the Congressmen who joined us, and AMA's Washington lobbyists, who said it was the most effective contact physicians could achieve, and the best ever produced by any state.

If congressmen don't hear from physicians back in their home districts, then the only voices they do hear are those of HEW lobbyists, health planners and others committed to an ever increasing role of government in medicine.

Plan now to make the Washington trip. After that, you may be sure that when an Alabama congressman is faced with health legislation and at a loss for a position that truly reflects the opinions of his constituents, he will pick up the phone and call one of you. And that is what politics is all about.

Hiliary H. Henderson Jr.

Information For Authors Concerning Manuscripts

Manuscripts should be typewritten, double spaced on white paper 8" x 11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

Copy Changes: When an author receives a galley proof back from MASA, he is expected to make corrections only. Copy changes, alterations on proof from the original manuscript, are expensive. Please try to say what you mean in the original.

Length of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct. Drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

Reprints: Reprint orders should be returned at once. Prices for reprints, based on number of pages, will be furnished upon request. Communications should be addressed to *The Journal of The Medical Association of The State of Alabama*, P.O. Box 1900-C, Montgomery, Alabama 36104. Telephone 263-6441, Area Code 205. ●

FROM THE EXECUTIVE DIRECTOR

Hospital Bed Numbers Game

In the flood of mail doctors get, junk mail as well as important mail, it's easy enough to overlook what may be a vital communication.

I am referring here to inquiries that may well determine, in how they are answered, the number of hospital beds left intact in your community.

As you know, the four horsemen of national standards, appropriateness review, de-certification and statutory authority (if it comes, as it may) are threatening to run roughshod over hospitals in this and other states.

It has been estimated by the state's outstanding authority on the subject, (*The Alabama M.D.*, July 20) that arbitrary federal formulae could result in a loss of 1,260 to 1,620 hospital beds in the state's most populous county. Losses elsewhere would presumably be in proportion.

The most important single category of legitimate defensive maneuver against capricious bed closings is "patient origin data." This is a mechanism by which hospitals may dilute the inflexible 4 beds per 1,000 population standard.

It is known as an "exceptional circumstance" for referral hospitals, for the obvious reason that if they get patients from outside their geographic area, allowances must be made for that circumstance.

Patient origin data will allow the HSAs and the State Health Planning and Development Agencies to deduct from the straight population ratio calculation to determine the application of the national standards.

Utilization by persons outside the health service agency may thus offset, massively in some cases, the strict bed/population standard.

Unless this and other defenses are used, the programs expected in 1979 to reduce the number of beds will have heavy impact in some areas.

By all means, Alabama physicians should alert their hospital administrators and chiefs of staffs to the peril and this way to meet it.

Admittedly, federal regulations are infuriating when they are not simply mind-boggling. But when the die is cast, we have to play it their way to lose out entirely. If there are any questions, or if I can help in any other way, please feel free to call or write.

If I don't have the answer, I'll get it.

It is impossible to overstate the importance of this to Alabama hospitals and, by logical extension, to doctors who practice in them. From what I've heard, time is of the essence.



S. Lon Conner

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By E. VERNON STABLER, M.D.

Dr. Stabler's Advice To Young Physicians

No one really wants to take advice—most feel that they can give it on any given occasion. Perhaps the first prerequisite to giving advice, or assuming you are qualified for such a position, is age. I believe that is the only qualification I have for this role.

Nevertheless, certain facts of life keep recurring in our profession with a consistency that suggests a few words of enlightenment and warning are in order.

Each one of us is well aware of the changes and pressures and intensities that confront the beginning practitioner today.

Gone are the days of having to build a practice. Gone are the times when a starting doctor and his family had to go 1, 2, or even 3 years to attain middle class living income.

I will recall nearly 60 years ago having the great Harvard diagnostician and student counselor, Dr. Richard

Cabbot, in his famous annual open forum for students being always asked, How do we get started to build a practice? Reflecting the thoughts of the doctor of that age, the safe answer was always the same — "Dedication to your first patient."

Everyone will get his first patient and the next will surely follow if you are dedicated. This type concern has now given way to the modern era when the young doctor is sought, usually eagerly, at a price consistent with high income.

Problems Ahead

This new sophistication has always brought problems, as well as some of the nicer things of life. For example, the very limited fields of practice and scarcity of doctors. The problems spotlight specifically the scarcity of doctors willing to do general practice, or to work weekends, or long hours, or give up any time off, or to be contained in these routines, or subject to emergency activities. Thus, we have created an atmosphere at least far different from that of the years past. As a consequence, there is often the loss of the personal relationship with the patient — and the advent of the use of gadgets, tests, expertise, etc., etc., to, at times, cover up the more demanding, thorough, active investigation that often brings us to a more responsive, less distant, and closer diagnostic contact.

So, it follows that we may have more and more malpractice litigation and, with it all, more willingness on the part of the patient to criticize and blame the numerous and various doctors who have become only "a specialist" rather than a person or confidant. Often the doctor is no longer a friend — as well as, or in place of — a dispenser of scientific thought, knowledge and action.

Perhaps some of this is basic cause for what I am to say now. As you are assembled here today representing this

year's new class — the new influx of doctors at your first orientation session — I venture to say not a one of you would for a fraction of time consider yourself as a potential drug problem, as an alcoholic, as a definite malpractitioner, as an abuser, even yes, as a participant in a criminal act.

Yet, I can tell you that unless your group, statistically speaking, is far superior to the norm, with these estimates based on cases we have handled, 19 of you will have an alcoholic problem of sufficient degree to adversely affect in some way your profession and/or your patients. Eight of you will have this problem to such a degree that you will come before some one of the governing boards for disciplinary action. Twenty of you will have disciplinary action initiated against you following investigation by State Medical Governing bodies.

Eighteen of you will have a known drug problem of varying degree. This problem will cause 11 of you to face disciplinary action by some of the medical governing bodies, even to the extent of revocation of license for five of you. Eight of you will have some form of limitation put on your license to dispense drugs legally. It is estimated that seven of you will be involved with some illegal or criminal act in relation to your profession and three of you will get criminal convictions. Two of you will voluntarily surrender your license or certificate of qualification for just cause.

Less seriously, it is estimated, 27% of you will be hampered physically by overweight in some form, causing hypertension, cardiac damage, and/or various physical impediments. If you have paid any attention to these figures, you may now be wondering which of you will be the one — none of you will assume that you yourself will be so involved.

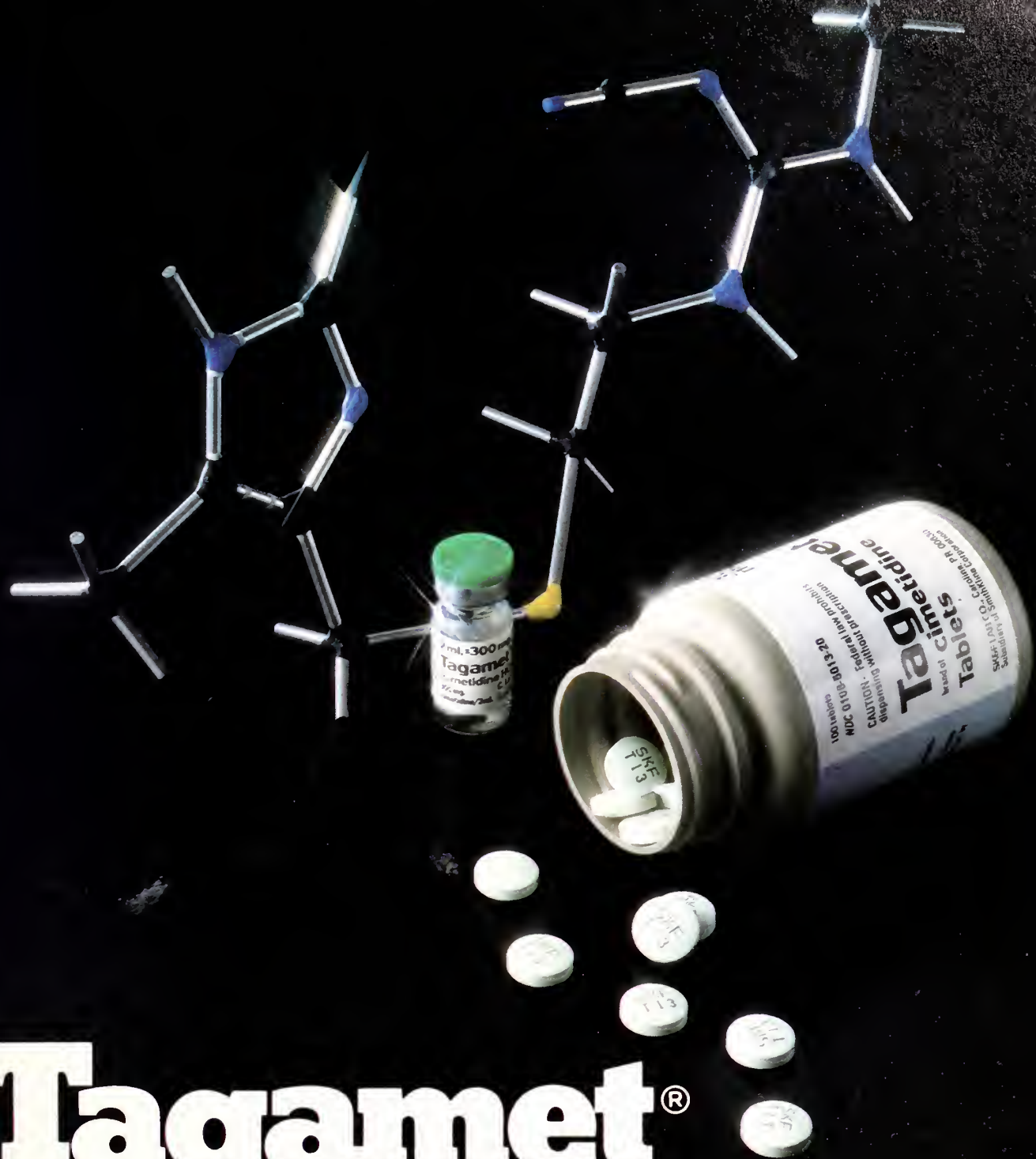
Sitting In Judgment

I was privileged to sit on our State Medical Board of Censors for three years.

It was a rewarding and challenging

CONTINUED ON PAGE 18

Presented at the 117th Annual Session of the Medical Association of the State of Alabama in Huntsville, Alabama, April 1978.



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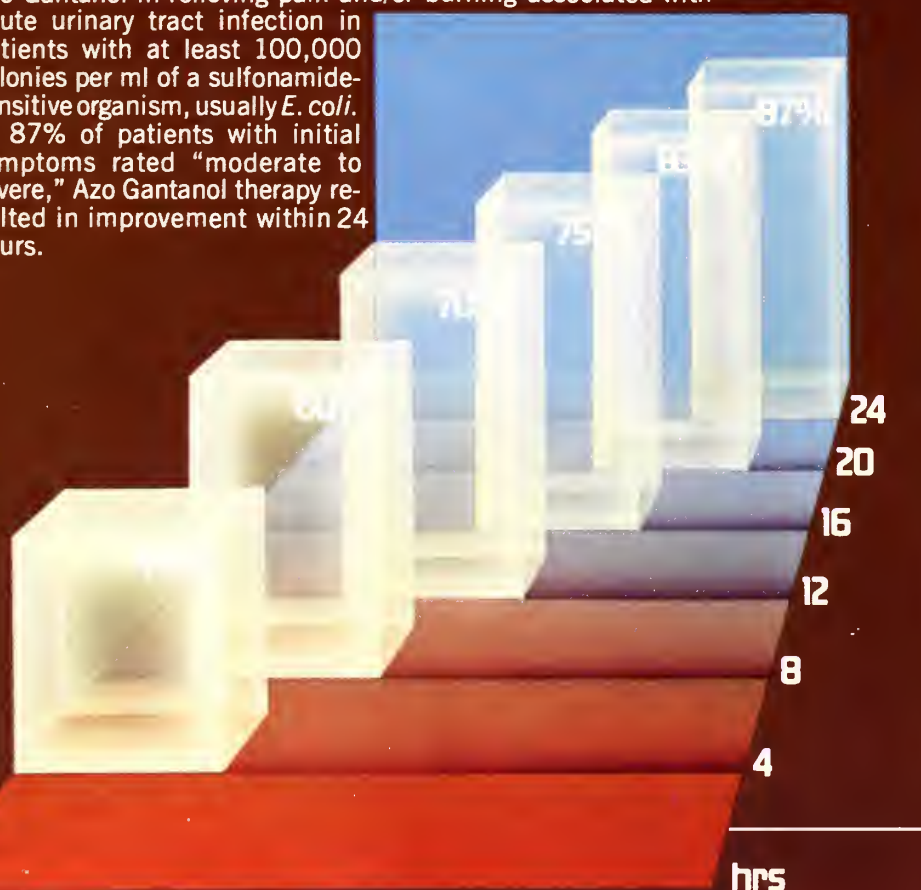
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the pain

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the pathogens

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Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis-nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

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BRIEF SUMMARY

Indications Oral potassium therapy for the prevention and treatment of hypokalemia which may occur secondary to diuretic or corticosteroid administration. May be used in the treatment of cardiac arrhythmias due to digitalis intoxication.

Contraindications Severe renal impairment with oliguria or azotemia, untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps and hyperkalemia from any cause.

Precautions: Potassium intoxication by oral administration rarely occurs in patients with normal kidney function, however, potassium supplements must be administered with caution, since the amount of the deficiency or daily dosage is not accurately known. Frequent checks of the clinical status of the patient, and periodic ECG and/or serum potassium levels should be made. High serum concentrations of potassium ion may cause death through cardiac depression, arrhythmias or arrest. This drug should be used with caution in the presence of cardiac disease.

In hypokalemic states, especially in patients on a low-salt diet, hypochloremic alkalosis is a possibility that may require chloride as well as potassium supplementation.

Adverse Reactions: Nausea, vomiting, diarrhea, and abdominal discomfort have been reported. The most severe adverse effect is hyperkalemia.

Overdosage: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications". Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.

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The Need For A Practice Management Course In Residency Programs

Suggested Program Content

By J. THOMAS MARTIN

Business Manager, Division of Perinatal Medicine,
Department of Pediatrics, University of Alabama in Birmingham

Preliminary Philosophical & Promotional Notes By George D. Oetting, Ed.D., Director of Education

Mr. Martin's concern about the lack of practice management education in residency training programs in the following article is equally shared by the MASA Education Department. Recently, I had the opportunity to discuss this problem with the directors of most of the residency programs in Alabama while setting up a special AMA-MASA workshop. All agreed that there was a need to provide this practice management education; however, I discovered there were great differences in the amount of education actually provided to residents. It covered a whole spectrum—from none to a one shot half-day session to a comprehensive program fully integrated into the residency curriculum.

To help fill the gap, we are annually scheduling a special AMA-MASA workshop on "Starting Your Practice." This two-day program provides much useful information on the business side of a medical practice. Our 1978 workshop was recently held in Birmingham with a "full house" in attendance. An interesting note on attendees—several were not "rookies" about to enter practice but had been in practice for a number of years; in one case, for many years. They felt a great need for this kind of information.

In addition to this workshop, we are planning an annual "M.D. Retreat" on that dead weekend in November when Auburn and Alabama are resting and licking their wounds before the Iron Bowl contest. This retreat will focus on some special practice management topic of interest to both the physician and spouse. Last year the topic was "Negotiation." This year's workshop (Nov. 18-19) will focus on "Enhancing Your Financial Skills."

The Education Department spends considerable time developing and presenting practice management workshops—probably more than I have noted in most other state societies. This is done because we feel that a well run office, using effective practice management techniques, will help to prevent the physician from getting bogged down in office problems and allow him more time to do what he has been trained to do.

Most residency programs are deficient in a major area of significant importance to a new physician—they fail to provide education in practice management.

In my job as a medical management consultant, this fact has become increasingly apparent through my work with physicians. It is essential in practicing the healing arts that a physician be able to manage his practice so as to keep it fiscally healthy. Paradoxically, this fiscal stability does not always come from an increasing gross income, but instead as a result of high business efficiency within a practice. The training and education necessary to establish that business efficiency — even on a minimal level — is sorely lacking in most residency programs.

The practice should be managed efficiently for two reasons — Monetary and Medical.

First, the monetary aspects. Better management means

greater financial reward. This is well documented in the literature (see "Best-Run Practices," *Physicians Management*, 1/78:15). Basic common sense suggests the advantages of learning principles of practice management prospectively during residency rather than retrospectively stumbling through by trial and error as practice begins. Since a physician must provide for himself and his family like anyone else, the latter method is uncomfortable and less effective. In addition, the rising spiral of medical costs squeezes both physician and patient, and a well managed practice can protect itself while holding down fee increases.

Medical Benefits

Secondly, and surely most important, are the medical benefits of better practice management. Physicians who scoff at improving the management of their practice make the mistake of equating greater business efficiency only

THE NEED FOR A PRACTICE

MANAGEMENT COURSE IN RESIDENCY PROGRAMS: SUGGESTED CONTENT

with higher gross income. Their argument, that if money were their prime goal they would be in something other than the practice of medicine, is only partially valid. They fail to see the improved medical care that results from better practice management.

As the experienced management consultant, Millard K. Mills of Waterloo, Iowa, so aptly stated, "The doctor who wants just to be a healer is often bogged down in inefficiency so he winds up giving the poorest service to the least number of patients. In the end, therefore, he defeats himself."

An important effect of better management of a medical office is an increased capability of that practice to care for patients. Fiscal efficiency allows more of the physician's time to be devoted to the quality of patient care. This medical benefit cannot come about, however, unless the physician is aware of the business principles necessary to effectively manage his practice. These are the principles that a practice management program during his residency should provide.

A practice management course should contain general topics, applicable to all types of practices. The actual lecture/participation time to provide this information is about 1½ - 2 hours a week for 8-10 weeks. Program content should be flexible, in part determined by the talents of the faculty available.

Some courses choose only business experts—management consultants, tax attorneys, certified public accountants, etc.—as lecturers. Others rely on established physicians who have been through the experiences of establishing practice and understand practice management.

I recommend a combination of these two approaches. The student will thus learn the business side of medical practice from business advisors and how to implement that advice from physicians of demonstrated success. Finding guest lecturers from business will not be hard or costly, since they get "free advertising" by participating in such a program.

Considering their private practice demands, securing physician guest lecturer participation is easier than one would think. James E. Joines, Jr., management consultant of Lynchburg, Virginia, uses physicians in his practice management course at the University of Virginia. He states:

"Normally physicians are pleased the school wants them to teach and do not hesitate to say yes. If funds are available, then a small honorarium as a thank you is appropriate."

A format mentioned only to be condemned, is where a medical school faculty member teaches a lecture course from a text book. This type of course typically fails to supply the student with "real world" expertise while it ignores and neglects the large reservoir of real experience in the community. I would recommend against the use of this type of program because it is too limited.

As a guideline to establishing a course I recommend that it cover three major topics:

- I. Establishing a Practice
- II. Managing a Practice
- III. Personal Financial Management

Using these as pivotal discussion topics, a program can easily be outlined. Possible topics pertinent to Establishing a Practice include:

- A. Financing a Medical Practice—A local banker in charge of professional loans is the natural guest lecturer for this topic, *if* he has had experience with initial medical practice loans. Alternately a medical management consultant should be used.
- B. The Role and Proper Use of Advisors—Local physicians could relate the number and type of advisors they use for their practice and the efficacy of their advice.
- C. Selecting the Proper Form of Practice—Proprietorship vs. Partnership vs. Incorporation vs. Salaried Position—A medical management consultant should explain and differentiate between these forms of practice thoroughly.
- D. Joining a Group Practice or Forming One's Own Practice—Recently established physicians discuss how and why they chose the community they practice in and the reasons they chose to join an existing practice or form their own practice.
- E. Initial Professional Tax Consideration and the Effect of Taxes on a Practice—This category would best be covered by a tax attorney, but a certified public accountant could also be used. Whoever is used needs to keep this subject on the level of one starting practice, which is sometimes difficult to do.
- F. Selecting and Obtaining The Best Office Through Leasing or Purchasing—A real estate attorney should talk about leases and purchasing and the caveats connected with business real estate.

Once the practice is established, principles of management come into focus. Ideas for program content in Managing a Practice include:

- A. Personnel Management
- B. Office Procedures—(Scheduling Patients, Handling of Telephone, Charts and Records, etc.)
- C. Billing and Collections
- D. Practice Financial Management
- E. Professional Insurance

All five of these basic topics should be thoroughly discussed by a medical management consultant over several sessions. A consultant is uniquely best qualified as a result of his experience and training. If such a consultant is not available, I suggest involving a physician from a large group who is charged with the management of that group's practice. It is essential that a lecturer of demonstrated competence be found for this portion of the practice management program. Notwithstanding the rather mundane nature of these topics, they comprise the core of this program and require presentation with flair and accuracy by an individual capable of demanding respect of the students.

For *Personal Financial Management*, the new physician should be shown how to handle the personal financial success of being a physician. More importantly, this part of the program, if properly presented, will provide a good understanding of the physician's financial base planning and how to handle it, even if his practice develops slowly or turns sour. Possible topics for inclusion:

- A. Tax Planning for the Physician—A tax attorney or certified public accountant should be used to show

how proper tax planning is essential to any financial plan the physician formulates. Without proper tax planning the efficacy of any financial plan is in jeopardy. An expert look at tax ramifications from various angles is essential in order to point out the need for progressive planning.

- B. Personal Budgeting and Money Management—A public accountant, certified public accountant or management consultant should demonstrate the rudiments of personal budgeting. This subject is particularly valuable for new physicians and should not receive sketchy treatment because of its simplistic nature. With the necessary interfacing of the physician's business and private monetary matters, poor personal budgeting can lead to financial disaster.
- C. Personal Insurance—An insurance broker or an agent for a major agency should discuss this subject in a non-commercial manner. (Although a non-commercial presentation from someone with a vested sales interest seems impossible at first glance, one can still find some professionals left in this field!) The aim would be to eliminate confusion about types of insurance coverage available and to elaborate on the unique personal insurance needs of the new physician.
- D. Investments for the Physician—A reputable investment counselor or broker from a large brokerage firm could discuss basics of investing, as well as types and kinds


of investments available to the new physician who has limited funds.

Use of all or most of these topics will provide a balanced and complete program content for a practice management course. As a central feature of the program, I suggest the participants be provided a generous amount of handout material which explains in detail the subjects covered in lecture. This will add relevancy and also provide future reference material. For an excellent guide on the subjects of planning and managing a medical practice, I suggest the book by the noted management consultant, Leif C. Beck—"The Physician's Office," published by Excerpta Medica.

A program of this type teaches the physician, *during medical training*, the practical skills essential to the efficient practice of medicine, and would be beneficial for both patient and physician. This approach provides the new physician with the knowledge of management principles and tools required to properly implement the medical facts he has learned.

The program outlined here obviously will not make successful business managers of all the participating physicians, nor should it try to do so. The goal should be to awaken interest in those practical areas that require immediate attention upon setting up a private practice, and to provide the new physician with a better chance to become a more productive physician. □

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Reader Request

Editor, The Journal:

In preparation for a September meeting of the National Institute of Allergy and Infectious Diseases to consider the feasibility and advisability of making the insect sting kit available to certain trained categories of medical and lay persons, without a specific prescription by a physician, I would be interested in receiving information and comments by the reader of this journal on the following questions:

- Have you any knowledge of a fatal reaction to an insect sting or drug or food? If so, I would appreciate as much detail as possible, including information concerning the time interval between contact with the offending agent and death.

- If you know of such a fatality or fatalities, in your estimation, would an immediate subcutaneous injection on the scene of a premeasured dose of epinephrine 1:1000 (0.3cc to 1.5 for adult 0.2 to 0.3 cc for children) have afforded a different outcome?

- Have you any knowledge of adverse effects of subcutaneous injections of epinephrine 1:1000 in the above

dosages? If so, again I would appreciate as much detail as possible.

We would certainly appreciate any information you can supply.

Claude A. Frazier, M.D.

Doctors Park, Bldg. 4

Asheville, N.C. 28801

In Agreement

Editor, The Journal:

After reading Dr. Ronald Henderson's article regarding "The American Health Care System, In Jeopardy," I would like to heartily echo his sentiments.

I thought this was an excellent article which brought to light some real problems in our health care system. It is high time that we as physicians tended our own house rather than have it tended for us.

You better believe if we don't do it, someone else will; and that housekeeper won't ask which drawer we would like our clean underwear placed!

Robert L. Baldwin, M.D.

Birmingham, AL

TO YOUNG PHYSICIANS

CONTINUED FROM PAGE 10

experience. Perhaps my greatest surprise and sense of depression came in the form of tragedies, I, as a member had to see, experience, and judge. A number of my fellow physicians came before that board by law.

They were there for action by the board because of alcoholism, drug abuse—either personal use, or illegally dispensing drugs, or both—or accused of criminal acts in their medical practice...tragedies, for the individual and our profession; consequently more cause for the vastly increasing malpractice field. Each of these tragedies involved doctors, doctors who sat at one time in this orientation meeting, as you do, and thought, "Which one of my conferees will be the percentage that will surely come?" If only a word can reach some one of you to kindle a thought of warning, this advice may have some value.

Obviously, honesty is the basis for any such advice that can be given. Actual, accurate honesty must be defined by each of us individually.

I am not sure how honest I am. Under what circumstances would I shade or cover a wee bit to protect a family member or a friend, or to protect a family or friend's business?

Would I be as quick to do certain tests or procedures on a non-paying patient as on a paying one; on a government-pay patient as on a private-pay one?

Can I withstand the even tempting bait our government holds in front of me by using a cost-plus formula as a payment scale? Under this system, I know the more I spend and charge the higher my hospital is reimbursed or the higher my third-party profile becomes.

It is a moving and conscience provoking challenge to our judgment of strict honesty. William Lion Phelps, the great Yale professor of Logic and Counseling, in his classic book on Happiness, stated the case of honesty very succinctly and yet clearly with this illustration. If I go to a politician and offer him \$500 to vote a certain way and he throws me out the door, it doesn't necessarily mean the politician is honest. It means he can't be bought for \$500.

If I go back to this same politician and offer him a half million dollars, enough to make him independently wealthy, or to take care of his family as a millionaire does, and he hesitates to consider it, then he is not absolutely honest. It is only a matter of the amount of the bribe. Of vast importance is "what are the circumstances confronted."

'How Honest Am I?'

I must wonder just how honest I really am. People live and die on the judgement of their doctors. Honesty must be judged by each individual within himself. What leaves you con-

tent or what makes you happy in the practice of medicine is your decision. Of all the professions, even considering the ministry of the gospel, none should be more scrupulous in thought, deed and action than the medical profession. The individual doctor's image is a sharp and compelling responsibility to each one of us.

I do not count as glorious the fact that I am not guilty, such is my own necessity. Why do we have investigators, undercover agencies, etc? We have to face the fact that some of us in this very orientation session will some day be found guilty. You must face and admit that probability. This warning I call *Advice!* Face the responsibility of carefully defined honesty for yourself.

As a profession we must start with the simple fact—the single individual is not solely to blame. The weak are not surely alone. The folly of a medical practice is not comedy, it is tragedy. It causes suffering for many including our families, our patients, our profession. Some one is crucified by our every irresponsible act. The stress of circumstance is not excuse enough.

All the advice you are given, and it will be legion, may only titillate your conscience. All the ironclad rules available, and they are few, may merely serve your convenience. At the end of your journey of service, each of you must surely face the question, "What have I done for or to the art of medicine?" □

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1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974

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Indications—Relief of symptoms of anxiety and depression.

Contraindications—Glaucoma, tendency toward urinary retention, or hypersensitivity to doxepin.

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Usage in children under 12 years of age is not recommended. MAO inhibitors should be discontinued at least two weeks prior to the cautious initiation of therapy with this drug, as serious side-effects and death have been reported with the concomitant use of certain drugs and MAO inhibitors.

In patients who may use alcohol excessively potentiation may increase the danger inherent in any suicide attempt or overdose.

Precautions—Drowsiness may occur and patients should be cautioned against driving a motor vehicle or operating hazardous machinery. Since suicide is an inherent risk in depressed patients they should be closely supervised while receiving treatment. Although Adapin has shown effective tranquilizing activity, the possibility of activating or unmasking latent psychotic symptoms should be kept in mind.

Adverse Reactions—Dry mouth, blurred vision and constipation have been reported. Drowsiness has also been observed.

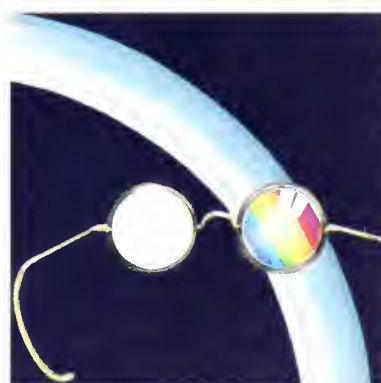
Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

Dosage and Administration—In mild to moderate anxiety and/or depression: 25 mg t.i.d. Increase or decrease the dosage according to individual response. Daily dosage, up to 150 mg may be taken at bedtime without loss of effectiveness. Usual optimum daily dosage is 75 mg to 150 mg per day not to exceed 300 mg per day.

Antianxiety effect usually precedes the antidepressant effect by two or three weeks.

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For a more detailed description of this new and valuable service or to arrange a consultative visit, contact: John A. Guerrieri, Jr., Program Director, Consultative Services Program, at (312) 751-6417.

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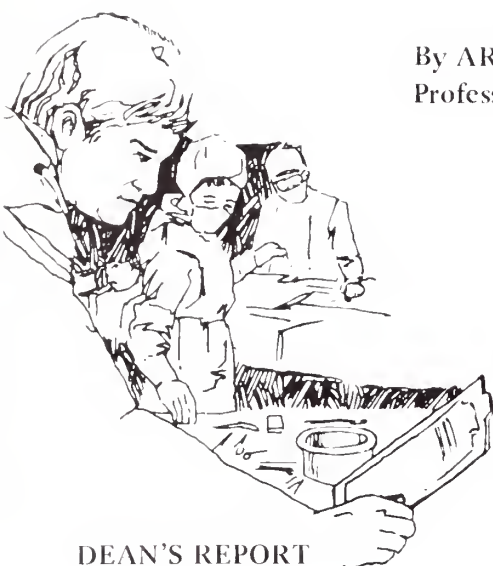
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By ARTHUR J. DONOVAN, M.D.,
Professor and Chairman, Department of Surgery, University of South Alabama

DEAN'S REPORT

USA Surgery Department's 5-Year-Record

The Department of Surgery at the University of South Alabama College of Medicine has been established for five years and contains the specialties of anesthesiology, ophthalmology, otolaryngology, surgery and urology. In addition to seven fulltime and part-time faculty, 49 surgeons serve on the voluntary faculty and participate in the educational programs. These programs are centered at the University of South Alabama Medical Center.

Patients are admitted to the teaching services at the Medical Center from the Clinic and Emergency Room, by referral of cases to the institution from the surrounding area and by admission of patients referred to the hospital by faculty — fulltime, part-time and voluntary. The staff of the University of South Alabama Medical Center Hospital is open and the physicians in the community who wish to join the staff are encouraged to do so.

The only full service Emergency Room in South Alabama is operating at the Medical Center. This activity provides the component of emergency surgery and acute care essential for an

educational program in surgery. Approximately two-thirds of the surgical experience at the Medical Center is elective. Emergency surgery is about equally divided between trauma and other emergencies. Other health care facilities in the community are utilized for elective undergraduate education in surgery and for short periods of assignment as a part of the program in graduate education.

Important Function

Undergraduate education in surgery is considered a most important responsibility of the Department of Surgery. The goals include acquisition of a broad background of knowledge of the natural history and pathophysiology of diseases of surgical importance, familiarity with the role of surgery in modification or elimination of disease, acquisition of skills in the diagnosis and treatment of the acutely ill or injured patient and understanding of complications of surgical disease, to include major organ dysfunction. The above knowledge and skills should benefit the student irrespective of his career choice, enhance his understanding of the role of surgery in therapeutics and provide an overview of surgery. The latter permits the students to evaluate surgical disciplines in choosing a career.

The faculty of the Department of Surgery conducts undergraduate education in all four years of medical school. Involvement during the first two years is limited to clinical correlations with basic science and to introductory clinical presentations. The major effort in undergraduate education is a required eight week surgical clerkship in the third year. Students are assigned to a surgical service at the University of South Alabama Medical Center as members of a team composed of faculty, housestaff and students.

This clinical experience in patient care is intended to develop clinical skills, competence in problem solving and experience in patient management. Students are assigned responsi-

bilities commensurate with their level of clinical development. Informal teaching exercises and conferences of eight hours each week are scheduled to allow classroom consideration of core content in surgery. These classroom exercises include content from anesthesiology, orthopedic surgery, thoracic surgery and urology. Currently, neurosurgery conducts a separate four week clerkship during which classroom exercises are scheduled to consider core content in ophthalmology, and otolaryngology. Elective experiences in all surgical specialties are offered during the fourth year in the form of subinternships.

A full graduate education program in surgery, conducted by the surgical profession in Mobile, was established at the Mobile General Hospital (now the University of South Alabama Medical Center) many years ago. Thus, the Department of Surgery of the College of Medicine five years ago inherited a viable and functioning program with an experienced Voluntary Faculty.

The Residency in Surgery is a five year program beginning with a categorical first postgraduate year in surgery (straight surgical internship). Six positions exist at this first postgraduate year level from which residents may be appointed to more advanced levels in surgery. Three individuals are selected each year to continue into the final four years of graduate education in surgery. Two openings for further education exists in orthopedic surgery.

Objective: Broad Experience

The program of graduate education in surgery is designed to provide a broad experience in surgery which will prepare a physician for community surgical practice or, on occasion, be the solid base for a career in academic surgery. In pursuit of this goal rotations are established in all surgical specialties.

Residencies do not exist in plastic surgery or thoracic surgery, but there are established hospital services in both fields and housestaff are assigned to these services as a component of the

educational program in surgery. Such assignments foster the goal of a broad program of graduate education. The residents in surgery are expected to develop a secure base of general medical knowledge and to acquire skills that permit them to function, after completion of their graduate education, with considerable independence, relying on consultants for needed assistance in the more complex clinical situations. The goal is "the internist who operates," fully recognizing the essential role of technical excellence.

The development of the research programs of the Department has been delayed in development both due to the high initial demands of the graduate and undergraduate educational programs and the need for construction of facilities. A new research building at the Medical Center is being completed and an excellent animal facility, operating room and supporting chemistry laboratories will then be opened. This facility will permit the initiation of animal research. A non-invasive vascular laboratory was established three years ago. This was developed for both clinical investigation and service. A coagulation research laboratory also has been developed. The results of programs in clinical care, initiated five years ago, are reaching the stage of fruition. The next major thrust of the Department must be to foster the growth of research, still in a nascent stage. Research activity will be integrated with educational programs, particularly at the graduate level.

The department desires that students — undergraduate, graduate and faculty — learn by their experience in the Department to recognize the importance of self-education, particularly through reading and thus become self-teachers. A questing approach to clinical problem solving based on logic and reason is emphasized, recognizing that the quality of practice in the years that follow formal education will be based far more on attitudes developed than on any specific knowledge or skills acquired. □

Where have all the artists gone?

Robert L. Baldwin, M.D.

Where have all the artists gone? I'm not talking about the ones with paintbrushes, but the ones with stethoscopes and scalpels. Artists?

Let's think back in time. It was not long ago that we as physicians were considered the most esteemed and trusted of all professionals; we still are today but to a much lesser degree.



Why the declining image of our public esteem and trust? Is it real or is it just bad publicity? Is there something wrong with us or our methods? Is so, what is wrong and what can be done to correct it?

I dare say there is no argument that the quality of medicine practiced today is certainly more advanced and scientific than in years past. After all, we can now revitalize patients with transplanted hearts and kidneys; cripples can be mobilized with artificial but functional joints; leukemics can be given prolonged, useful and even normal lives, heretofore being doomed to tragic deaths within months of diagnosis of their disease.

Practically every part of the human body is amenable to tune-up, repair or replacement. Virtually no disease must go untreated for lack of a therapeutic modality. Why then aren't people happy? Why aren't the politicians satisfied? Why is our profession being daily ridiculed in the press? Here may I repeat—where have all the artists gone?

Medicine is a profession, one requiring a thorough knowledge of physical disorders. But it is also an art and, as such, requires, even demands, much more. Norbert Weiner once said: "To live life effectively is to live with adequate information."

So it is to practice medicine; that basic pool of knowledge, continuously updated, is essential. However, the real art is in the delivery of that data in a way that the recipient of its beneficial effects not only feels better because of it, but feels a sense of gratification toward you for what you have achieved.

We must treat human nature, not only human disease. It's not enough to cure a disease and then experience a sense of ego-fulfillment; we must go farther, experiencing the same self-satisfaction from the expressions of an appreciative patient.

Suzuki, a Japanese philosopher, once said: "I am an artist at living, and my work of art is my life." So it is that we should feel about our patients' lives. Dwell not on the disease, but the patient afflicted with it!

As such, let's give back the heart-lung machines; throw away all the computers, dump protocols and the statistical rubbish they produce; to hell with our profession as that ugly monster labeled the "health care industry"—bring out the paintbrushes, set up the easels; let's all become Rembrandts. Let's do it before the final portrait of Medicine is painted. □

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Nevoid Basal-Cell Carcinoma Syndrome Or Hereditary Cutaneomandibular Polyneosis⁴

Paul G. Reque, M.D. and Allison E. Imler, M.D.

Birmingham, Alabama

This uncommon syndrome was thought to be a recently described entity as late as 1932, and was said by Anderson, McLendon, and Howell¹ to have first been described by Reuben Nomland about that time. However, reading indicates that Jarisch, in Germany, described it as early as 1894. Because of his extensive study and reporting of 150 well authenticated cases,³ the syndrome may be frequently referred to as "Gorlin's Syndrome" since he described many of the syndromes' unusual characteristics in the early 1960's.

As may be read in Binkley and Johnson's paper² in 1951 the basal cell tumors were frequently confused with Epithelioma Adenoides Cysticum of Brooke, which is a distinct disease entity with multiple non-progressive, trichoepitheliomatous lesions which resemble basal-cell epitheliomas, but are usually only associated with turban-tumors of the scalp, and not the many other changes associated with Nevoid Basal-Cell Carcinoma Syndrome.

Nevoid Basal-cell Carcinoma Syndrome is variously said to be an "autosomal dominant polymorphic trait with good penetrance," or with 'poor penetrance'.³ The former however is believed to be the most widely accepted interpretation. There seems to be no differential as to sex. While the more obvious basal-cell epitheliomata are more frequently observed near puberty, the jaw cysts and dental abnormalities may be found several years earlier.

The main expression of this syndrome is in the finding of the basal-cell epitheliomata, but despite more than 150 well studied patients there is no regular pattern of the abnormalities that may be expected. The basal-cell lesions are inclined to be benign in childhood but become more destructive as adulthood advances. They differ from ordinary basal-cell epitheliomas in that they tend to occur in groups and are not limited to areas exposed to the sun.

The jaw-cysts found in Nevoid Basal-cell Carcinoma syndrome are integumental since they are lined with epithelium, and sometimes have remnants



Plate 1. Prosthesis in place after removal of mesenchymal tumor.

and distorted portions of teeth within them—"Odontogenic Keratocysts." The palms frequently demonstrate keratinous pits; there may be found bifid ribs, scoliosis, spina bifida, cervical ribs, frontal bossing, broadening of the root of the nose, pes planus, and various abnormalities of the viscera, oesophagus, and brain; mental retardation has been described several times.

The patient-history reported at this time is that of a white woman who has been followed in our clinic since February 1953, or 23 years. She had had an interesting career in surgery and has been a most cooperative patient.

This patient was first seen on February 10, 1953, at the age of 26, with a history of a tumor having been removed from the left maxilla in 1938, at the age of 11, with a diagnosis of a "benign myxoma." She began to notice swelling of the left maxilla in December 1952 and when seen in February 1953 she brought x-rays with her which showed a destructive lesion involving the inferior half of the left maxilla. A radical removal of the left maxillary lesion was done on Feb. 24, 1953, and the tissue was reported as a "low grade

malignant mesenchymal tumor." (Plate 1) From this point on the following lists her continued history of treatments:

- 5-26-53 Two epidermal inclusion cysts removed from left upper eyelid.
- 6-27-53 Two epidermal inclusion cysts removed from left upper eyelid.
- 7-6-53 Infected cyst incised, left upper eyelid.
- 10-31-53 Epidermoid cyst removed from right index finger.
- 1-18-56 Infected cyst incised, left upper eyelid.
- 7-15-56 Two basal cell carcinomas removed from left cheek, and epidermoid cyst from left upper eyelid.
- 8-12-56 One basal cell carcinoma removed from skin of chin.
- 6-4-57 Epidermal inclusion cyst removed from left lower eyelid.
- 5-17-58 Basal cell carcinoma removed from left lower eyelid and skin of nose.
- 5-19-58 Thyroidectomy for colloid adenomatous goiter.
- 11-13-58 Basal cell carcinoma removed from left arm (Plate III) and skin of left breast, and epidermal inclusion cyst removed from left upper eyelid.
- 2-17-60 Twelve basal cell carcinomas removed from presacral region, gluteal region, dorsal region, scalp, chest face and neck. (Plate II).
- 3-29-62 Eight basal cell carcinomas removed from skin of the nose, shoulder, eyelid, back, hip, scalp and face.

Patient subsequently moved to Nashville and was under the care of a physician for a discharge from the left nostril, which was presumably diagnosed as nasal polyps. In May 1964 the patient returned to Lloyd Noland Hospital with a polypoid tumor extruding from the left nostril and was admitted to surgical service and a large amount of friable, polypoid tissue was removed by Dr. H. Wiygul, and the tissue was reported to be a poorly differentiated malignant mesenchymal tumor from left nostril. The nose and nasopharynx were treated with 6,000 r, air dose, of cesium teletherapy with apparent complete regression of the tumor mass.

During the admission in May 1964, x-ray studies revealed a large, cystic lesion involving the posterior half of the body of the left mandible and extending into the ramus of the left mandible. (Plate V). A film of the pelvis also demonstrated calcification of the ovaries, (Plate IV) or fibromata of the ovaries. The film of the chest also showed a dysplasia of the inner third of the left clavicle.



There were no apparent rib deformities, but she did exhibit a kyphoscoliosis.

On 9-26-65, removed abdominal mass-lymph-angiectasia (cystic changes in mesentery) and 13 basal cell carcinomas of the skin.

On 11-3-65 malignant mesenchymal tumor of the nostril was treated with local application of radium (1440 mg.hrs.), followed by temporary regression of the neoplasm.

On 1-17-66, recurrent polypoid mass, left nostril, was biopsied and reported as malignant mesenchymal tumor.

The patient was referred to Dr. John J. Hicks, who performed a radical removal of the recurrent malignancy involving the left maxilla, left nostril, left ethmoid area and left orbit on 2-7-66. The procedure required the removal of part of the palate, the orbital contents, portions of the nose and maxilla, and also a portion of the malar bone on that side. Patient has a large operative defect resulting from the above procedure, the defect extending through the left side of the cheek defect into the mouth via the palate defect. The tissue report classified the neoplasm as a fibrosarcoma with tumor extending to the margins of the specimen.

The probabilities of recurrence of the malignancy were considered great, and in all probability this patient might require further treatment for this disease in the future. In addition, the extremely severe defect which was present in the left orbit, left cheek, left maxilla, and left side of the palate required subsequent plastic procedures and prosthetic appliances. In view of the medical history as outlined above, it was felt that the prognosis was



(Left to Right) Plate 2: Residuals of numerous skin tumor excisions. Plate 3: Basal-celled carcinoma left upper arm. Plate 4: Showing fibro-calcifying ovaries. Plate 5: Large cystic lesion in mandible.

extremely poor, and the patient was considered to be totally disabled at that time.

Case Summary: 86 basal cell carcinomas of the skin of face, neck, scalp, trunk, left breast and left upper extremity. Benign myxoma, left maxilla, at age 11. Malignant mesenchymal tumor, left maxilla, age 26. Numerous cysts of eyelids, and single cyst from right index finger. Large cyst, left mandible, dysplasia left clavicle, Kyphoscoliosis of dorsal spine, and calcification of both sides of pelvis, consistent with bilateral ovarian calcification, probably with associated ovarian fibromata. Multiple benign nevi. Cystic mass of mesentery (Lymphangiectasia), age 38. Recurrent malignant mesenchymal tumor, left nostril age 38. Recurrence as metastatic mesenchymal tumor, left lobe lung.

The above summary takes us through February

1966. Since that time the patient has shown no evidence of recurrence of the sarcoma of maxilla, but has had approximately 12 additional basal cell carcinomas removed, and a metastatic mesenchymal tumor of the left lung.

The photographs duplicated in this article will show the wide extent of the lesions, both clinically and radiographically, and describe some of the pathologic detail.

The *therapy* of basal cell nevus syndrome continues to be a matter of expediency and need. Contrary to the lesions of Epithelioma Adenoides Cysticum of Brooke, the lesions found in Nevroid Basal-cell Carcinoma Syndrome are inclined to become seriously destructive and malignancy is the rule. Early destruction is indicated⁶ lest persistent disfigurement becomes severe and prompt. The

CONTINUED ON PAGE 39



(Left to Right) Plate 6: Dysplasia of inner third, left clavicle. Plate 7: Showing residual facial defect after maxilo-facial surgery.



FIGURE 1.

Another Ileostomy Appliance

Rube R. Hundley, M.D.
1908 Fairview Avenue
Dothan, Alabama 36301

The ideal appliance for the patient with an ileal conduit is yet to be found but a different approach to the problem is described that includes the characteristics of *reliability*, especially adaptable to children and young adults active in sports; *economy*, costing very little for each appliance; and *disposability*.

This particular appliance was devised by one of our patients. He designed, produced and wore the appliance after undergoing a cystectomy. After going through the spectrum of commercially available appliances and not finding one that suited his individual need, he developed this home-made device. This idea has been carried from patient to patient throughout the community of Dothan, Alabama, and is described here so that other patients may benefit by the experience of these individuals.

The appliance is made from products obtained from any automotive repair shop or hardware store. The estimated cost of each appliance is from 40 to 60 cents and the life of the appliance is from 4 to 6 weeks, depending on the individual preference. When removed it is thrown away, eliminating the problem of objectionable odor and necessary cleaning of the permanent type bag.

The appliance can be made by the patient, or in the case of a child, by the child's parents and put

on by the patient. As can be seen by the illustrations the appliance has no belts, straps or supports and is held in place by regular appliance cement applied over tincture of benzoin.

The success of the appliance hinges on two factors: 1) The fact that the appliance acts as an extension of the ileal conduit for the flow of urine into the leg bag and does not act as a weighted reservoir with tension on the skin seal; and 2) the fact that the face plate is made of flexible rubber that allows the skin to be wrinkled with it and permits it to lie flat conforming to the topography of the abdominal wall.

At present, the appliance can only be obtained by the individual constructing it by the described method. With a little practice almost any patient can construct one for a trial. One patient designed a cloth bag attachable to his leg by an elastic support to hold the rubber or plastic leg bag. This eliminates any possibility of accidentally pulling off the conduit face plates. It is hoped that in the future the device may be better and more economically constructed by a commercial developer. The idea and the device are simple, but therein lies its success.

Illustration No. 1 pictures the materials required to make the appliance.



FIGURE 2.



FIGURE 3.



FIGURE 4.

MATERIALS REQUIRED:

- a) The plastic top from a coffee can may be used as a template.
- b) An ACMI collector bag.
- c) A standard stoma gauge to measure the size of the stoma.
- d) A short length of rubber or polyethylene tubing.
- e) Scissors.
- f) One inch adhesive tape.
- g) Cured rubber tire patching (3" individual patches if sheets are not available).
- h) Tire patching cement.
- i) Talcum powder.



FIGURE 5.

Step One: The diameter of the stoma should be measured with a stoma gauge or centimeter ruler. A template should be made using the plastic top from a coffee can, being two to three centimeters larger in diameter than the stoma. These measurements can be used to mark off the face plate on the rubber tire patching as shown in Illustration No. 2. A precut three inch circular patch is available, eliminating the need to measure and cut one out.

Step Two: After marking off the inside and outside diameter of the face plate, cut it out as shown in Illustration No. 3 and thin the edges to the desired size. One of the advantages as stated is that it can be tailored to each patient's measurements and/or appliances.

Step Three: Turn the collecting bag inside out so that the rolled rubber edge is inside. See Illustration No. 4.

Step Four: Place the plastic guide inside the collecting bag. With the bag stretched over the guide, apply the rubber cement to the surface and →



FIGURE 6.

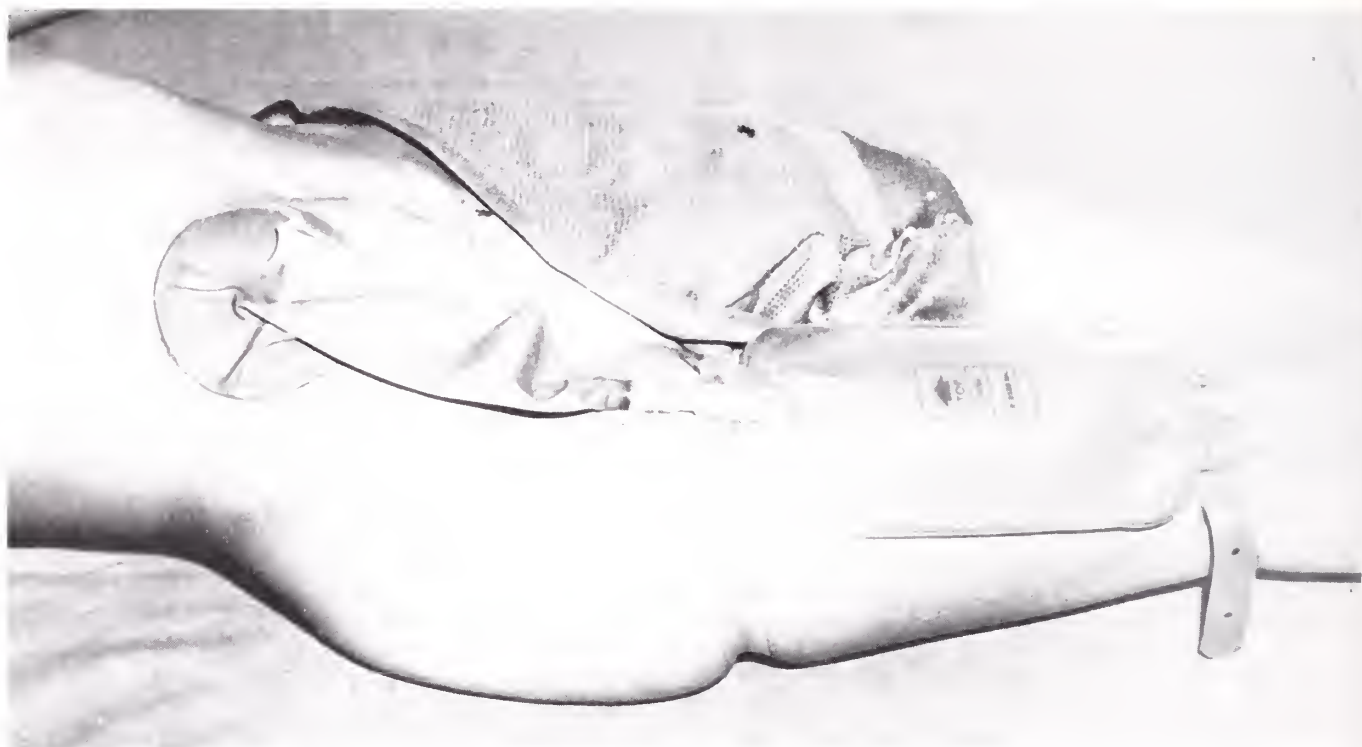


FIGURE 8.

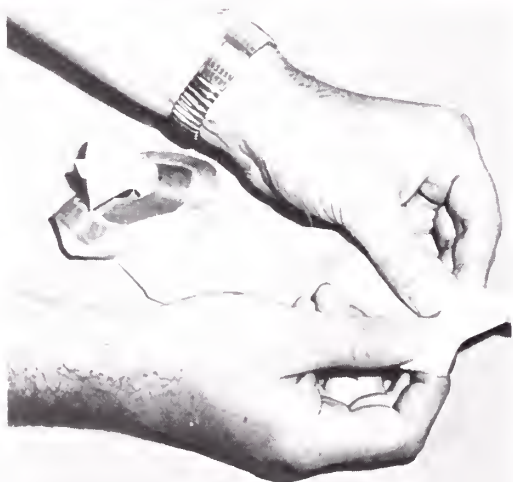


FIGURE 7.

cement the rubber faceplate to it with the sticky side down. (The sticky side is the side with the removable paper applied to it.) See Illustration No. 5. Press all of the air bubbles out to make a tight bond between the two rubber surfaces. This takes a little time but it is necessary for the reliability of the appliance. Remove the plastic guide through the stoma opening and turn the collecting bag inside out.

Step Five: Cut off the rolled rubber edge of the collecting bag to make it smooth. See Illustration No. 6.

Step Six: Apply the length of tubing to the end of the collector bag by dropping it through the bag and pushing it out of the nipple after first dusting the inside of the bag with talcum powder. Remove the backing from the inside of the faceplate and apply directly to the skin with skin adhesive. The use of tincture of benzoin on the skin surface prior to appliance of the cement has minimized skin irritation. See Illustration No. 7.

Step Seven: The appliance can be attached to any satisfactory leg or bed drainage bag.

Herein has been described a simple ileostomy collecting apparatus that meets three important criteria: *reliability*, *economy*, and *disposability*. While we wait for the ideal appliance, this may suffice since it is a simple, home-constructed appliance and allows the patient a wider variety of activities without discomfort. □

A Case Report

"H-Type" Tracheoesophageal Fistula Endoscopic Diagnosis

William L. Buntain, M.D.*
Robert P. Belin, M.D.

ABSTRACT

The diagnosis of "H-type" tracheoesophageal fistulas in infants can be safely made with relative ease using the telescopic endoscopes. Management can be appropriately and promptly carried out based on endoscopic documentation. A recent and representative case is reported.

CASE REPORT

A 36 hour old male infant was noted to have severe choking, coughing and cyanosis with feedings. After attempts to pass a nasogastric tube were unsuccessful, a diagnosis of tracheoesophageal fistula with proximal esophageal atresia was made. However, efforts to confirm this diagnosis resulted in the successful passage of a firm nasogastric tube into the stomach. Because of the history suggestive of the possibility of an "H-type" tracheoesophageal fistula bronchoscopy and esophagoscopy were undertaken with a Storz telescopic endoscope (Storz Endoscopy American, Los Angeles, California). The tracheal mucosa was mildly inflamed and 2.5 to 3.0 cm proximal to the carina in the posterior membranous trachea was an easily rec-

ognized "pit," classical for an "H-type" tracheoesophageal fistula. A number 3 ureteral catheter was passed via the trachea through the fistula and transesophageally into the stomach. This was confirmed by transabdominal wall palpation and x-ray (Figure 1). The endoscope was withdrawn from the

CONTINUED ON PAGE 39



Figure 1: A cross-table roentgenogram showing the ureteral catheter in the trachea posterior to the endotracheal tube, traversing the tracheoesophageal fistula (cephalad arrow) above the clavicles and coiling in the stomach (caudad arrow). This demonstrates the transfistula passage of the catheter and therefore the presence of the fistula; the course of the fistula in a proximal-trachea-to-distalesophagus "N-type" fashion; the level of the fistula above the clavicles and so accessible via a cervical approach; and the presence in the stomach confirming distal esophageal patency.

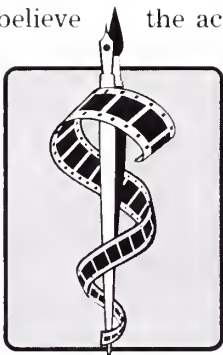
*Chief of Surgery, The Children's Hospital; Associate Professor, Department of Surgery, Director, Division of Pediatric Surgery, University of Alabama School of Medicine, Birmingham, Alabama.

Reprint Requests: William L. Buntain, M.D., Department of Surgery, The Children's Hospital, 1601 6th Avenue South, Birmingham, Alabama 35233

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LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE: Age 52; St. Louis University, 1961; National Board Certified; seeking practice in multi-specialty group, single specialty group or industrial. Available October 1978. LW-11662.

GENERAL PRACTICE/FAMILY PRACTICE: Age 57; University of Kansas, 1950; Will be American Board Eligible in 1978 in Family Practice; seeking practice in administrative, institutionally based or public health. Available September 1978. LW-10786.

FAMILY PRACTICE: Age 31; Ramathibodi Hospital, Bangkok, 1973; American Board Eligible; seeking practice in solo, partnership or single specialty group. Available November 1978. LW-10796.

INTERNAL MEDICINE/PEDIATRICS: Age 36; Gandhi Medical College, 1963; American Board Certified; National Board Eligible; seeking practice in specialty in a medium sized town. Available October 1978. LW-07378.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03

INTERNAL MEDICINE: Age 32; Tulane, 1971; American Board Certified in 1974 in Internal Medicine; seeking practice in town of 25,000 to 50,000 population. Available at a negotiable time. LW-0500.

INTERNAL MEDICINE/PULMONARY DISEASES: Age 55; Southwestern Medical, 1948; American Board Certified in Internal Medicine; seeking practice in school health, institutionally based, or public health. Available April 1979. LW-11941.

MEDICAL STUDENT: Age 26; Universidad Central Del Este, Dominican Republic, 1982; seeking family practice in community willing to finance a medical student. LW-07178.

UROLOGY: Age 31, New York Medical College, 1974; seeking practice in a group, partnership or solo. Available July 1, 1979. LW-07278.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

ORTHOPEDIC SURGEON: Age 31; Med. College of Georgia 1972; seeking practice in town of 50,000 plus population. Available August 1979. LW-701

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PSYCHIATRY: Age 54; University of Cincinnati, 1951; American Board Eligible in Psychiatry; seeking general, specialty, or assistant or associate practice in town of 100,000 plus population preferably Montgomery. Available this summer. LW-0502.

SURGEON: Age 35; Medical University of South Carolina, 1968; seeking practice in specialty in a town with a population of 50,000 - 200,000. Available in the fall of 1978. LW-0503.

SURGEON, GENERAL/FAMILY PRACTICE: Age 32; Univ. of Mississippi 1973; will be American Board eligible in 1978 in General Surgery; seeking single specialty or

multi-specialty group or partnership. Available October 1978. LW-08593

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400

UROLOGY: Age 30; Yale Univ. 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800

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FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital privileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities of 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

PHYSICIAN WANTED to take over busy practice in General Medicine in convenient location of Tuscaloosa. PW-05178

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27



A Diatribe On Lousy Slides

By GEORGE D. OETTING, Ed.D., Director of Education

It was my first big meeting as MASA Education Director.

The august gathering of CME experts from around the nation marched to their places on the dais of one of those delightfully elegant meeting rooms in the Chicago Palmer House.

The program began — illustrated with 35mm slides that looked like they had been hand-typed on Saran Wrap! Finally, after suffering through several lousy slide presentations, a speaker came on with clear, well-prepared slides. The audience actually clapped in appreciation for his efforts as the first slide was projected.

Time passes. It is now June 1978 at the AMA meeting in St. Louis. A high-level AMA staffer is using slides at a special CME program to explain recent national organizational changes. "This next chart," he apologized, "looks like the wiring diagram for a TV set." It did, and it was totally useless in clarifying the material he was presenting.

How many times have you suffered through CME presentations where the audio visual materials detracted from the presentation? What are your feelings when this happens? Perhaps like mine, exasperation, "tuning out" on the speaker and less personal effort to learn something. This is really unfortunate because a physician's time for attending CME programs is limited and every instructional minute should count — particularly when one calculates the total cost of the physicians time for all those in attendance.

Have I sold you on the problem? If so, then outlined below are some suggestions to help you prepare better 35mm slides for your next CME presentation. (This article focuses on 35mm slides since these appear to be the most popular AV aid at CME programs.) Some comments are a bit wry — deliberately so, to focus on

problems noted at CME programs as well as many years of work with teachers.

Basic Assumptions: When preparing and using 35mm slides, please assume the following:

- The audience can read English words (without your verbal help).
- Most people in your audience do not have photographic minds capable of instantly absorbing complicated diagrams or hundreds of words.
- Occasionally, your audience may need audio visual help to keep ideas straight during your presentation. (You also might need this help.)
- Your audience is sitting there to learn something—hopefully useful in their professional work. (They are not there to be dazzled by your genius!)

Yard Sale: Next, go through your stockpile of slides, and either have a yard sale or just throw away all of the following type slides:

- Conceptual models
- Organizational Charts
- Blow-ups of charts, diagrams and figures taken from medical text books with a 35mm close-up lens
- Long lists of symptoms, treatments, etc.

Perhaps this is a bit extreme, but most slides in the above categories are either not adequately explained in most presentations or are so full of words, lines and blocks that they are depressing to view and in most cases unreadable beyond the first row of seats.

If you must deal with these areas, use a handout that can be referred to or break down the chart or model into several elements and blow-up each element on a separate slide.

Practical Design Hints:

Now let's get to a few specific suggestions to consider when you draft the words, diagrams, etc., to be put on your slides:

- *Use a few key words* to communicate your ideas. They can be considered a speech outline you use to expand upon and develop. (If you project long complete sentences, which are read to the group, then you have an elementary reading class, not a physician CME program!)

- *Limit the total number of lines* on your slide to 5-6, so that only the main thoughts are highlighted. Also double space the lines. (Slides which look like a textbook page are depressing to look at, and cannot distinguish the major points.)

- *Use the biggest letters* possible on the slide. The fact that the slide is clear and readable to you at the podium, does not mean that this is also true for the poor guy in the rear row. A quick way to check this out is to hold your finished slide at arms length. If you can read the slide, so can your audience.

- *Use contrasting colors* which are readable and pleasant to the eye. Black printing on a clear or light background is easily washed out under poor lighting conditions. "Blue-print" slides (blue background with white lettering) are excellent, as well as black on orange or yellow, orange on blue, and many others which produce good color contrast.

- *Get further help* as needed from local sources. There are many educational professionals nearby in the public schools and colleges who have been trained in this area and probably would be willing to assist you.

In some cases, they may even have facilities available where you can make the slides. Check the library: there are many good reference books on this subject. (A good article used in preparing this diatribe is "Keep it Simple, Stupid," *Medical Meetings*, May 1977. Contact me if you would like a copy.)

- *Find a hard-nosed colleague* who will be willing to sit at the rear of the hall through a "dry run" of your program and slides. Ask him to critique the slides. Where they are clear, readable, necessary to understanding—i.e., did they aid in his learning?

There is hackneyed joke among audio-visualers that an expert is someone from out of town who is organized and uses colored slides. This does not make him a teacher. □

lesions in the syndrome are inclined toward progressive destructiveness all of the patient's life and cooperation of both patient and physician are needed at all times.

X-irradiation is not the method of choice for most lesions.⁵ It is better to use repeated electro-desiccation, or actual scapel surgery on early lesions. Cryosurgery can do just as much for the nevoid basal-cell carcinoma syndrome victim, as it can for any other superficial lesion and if it is the best modality of the surgeon it may well be the treatment of choice. Experience with the results with 5-Fluorouracil creams and liquids has been less than satisfactory. When deeper lesions are found such as mesenchymal lesions, squamous-celled lesions that are seriously progressive, cobalt radiation therapy may be necessary. It is not believed interstitial radium is well used by many therapists at this time. Moh's chemosurgical technic might have a place in an isolated lesion, but the frequent recurrences seem to make it more cumbersome and time consuming than other usually used modalities.

No systemic antimetabolites-vincristin, methotrexate, and others—have had enough use to comment upon, but this is experimental therapy and one can hope a combination will eventually be found that can yield more promising results.

Summary: A case of nevoid basal-cell carcinoma syndrome is presented with analysis of the associated abnormalities, and a discussion of the appropriate methods of patient care in these cases is detailed. □

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trachea, an endotracheal tube placed and the esophagus evaluated. The ureteral catheter was visualized entering the anterior esophagus 1.5 to 2.0 cm distal to where the catheter entered the tracheal origin of the fistula and was seen to traverse the remainder of the esophagus into the stomach.

It was apparent that the fistula was of the "N" or "H-type" and was high enough in the trachea to allow a transcervical approach. This was successfully accomplished without complication and the infant discharged on regular formula on the seventh postoperative day.

Comment

As had been previously alluded to by Johnson¹, Hendren², and Allen³, Gans and Johnson⁴ recently documented and emphasized the unique ability to diagnose, document and catheterize "H-type" tracheoesophageal fistulas using the Storz endoscopy equipment. This report accomplishes a similar result utilizing roentgenography for confirmation of diagnosis and location of the fistula.

This had been previously reported^{5,6} using conventional open tube endoscopy equipment but was believed to be a difficult and potentially hazardous procedure.⁷ The accuracy, safety and relative ease of documentation and management of these fistulas using the telescopic endoscopes should eliminate other complicated and unsatisfactory maneuvers. □

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6. Winslow, P. R. Bryant, L. R. and Hasbrouck, J. D.: Cystoscope endoscopy in the H-type tracheoesophageal fistula. Arch. Surg. 93:520-522, 1966.
7. Cohen, S. R.: The diagnostic and surgical management of congenital tracheoesophageal fistula without atresia of the esophagus. Ann. Otol. Rhinol. Laryngol., 79:1101-1107, 1970.

COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting on June 14, 1978:

- Held a joint hearing with the Emergency Medical Services Advisory Board and revised the Rules, Regulations and Standards, recommending the addition of MAST Trouser Units as antishock equipment and modifying first aid kits to include the poison antidote, Activated Charcoal.
- Reconfirmed the appointment of the State Registrar of Vital Statistics.
- Was advised regarding the deficiencies in divorce reporting in Alabama.
- Took note of the need for a list of diseases considered to be infectious, contagious and dangerous to the public health for reporting by Local Registrars as causes of death.
- Requested the drafting of a bill to update the list of notifiable diseases.
- Concurred in the action of the State Health Officer in interpreting the milk regulations dealing with the shelf-life of cultured dairy products.
- Approved the new Tuberculosis bed allocation formula by contract hospital proposing a 72-bed allocation total for 1979.
- Concurred in the federal action placing phenylcyclohexylamine in Schedule II effective June 16, 1978.
- Received information regarding legal actions dealing with radiation.
- Approved the initial issuance of Assurance of Need for 13 facilities.
- Held a hearing regarding two competing projects for primary health care centers for northern Shelby County and rejected both proposals on the basis of cost containment.
- Authorized a letter of opposition regarding the use of the Statewide Health Coordinating Council as a mediator on issues relating to "Appropriateness Review" where Health Systems Agencies and the State Health Planning and Development Agency cannot agree.
- Unanimously objected to the extension of authority of HSAs for review and approval/disapproval of federal funds beyond that already authorized.
- Recognized new Council Chairman, L. M. Russell, D.V.M., Council on Animal and Environmental Health, replacing N. B. King, D.V.M., whose term as Chairman has expired.
- Noted that James A. Pittman, Jr., M.D., was re-elected Chairman of the Council on Prevention of Disease and Medical Care.
- Concurred in the development of a project proposal coordinating efforts of the Bureau of Maternal and Child Health, Rural Health Initiatives and County Health Departments in six counties as an extension of services to mothers and infants in that area.
- Approved a request from the Alabama Hospital Association to cooperate in the provision of vital data for a special project with confidentiality control.
- Concurred in the budget projection of available state funds.

Brief Summary of Prescribing Information Combined TEGOPEN[®] (cloxacillin sodium) Capsules and Oral Solution

For complete information, consult Official Package Circular (12) TEGOPEN 9 11 75

Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established.

Precautions: The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

Usual Dosage: Adults: 250 mg. q. 6h.

Children: 50 mg. Kg. day in equally divided doses q. 6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

NOTE: INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

Supplied: Capsules—250 mg. in bottles of 100, 500 mg. in bottles of 100. Oral Solution—125 mg. 5 ml. in 100 ml. and 200 ml. bottles.



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A map of the Mobile area in Alabama, showing cities like Mobile, Prichard, and Chickasaw. The map is partially obscured by the large text headline.

IN THE MOBILE AREA, STAPH RESISTANCE HAS NOW REACHED 93%.*

*resistance to penicillin G among community-acquired staph infections. Data on file, Bristol Laboratories.

WHEN YOU CAN'T RULE OUT STAPH, CONSIDER
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(cloxacillin sodium)
“THE PENICILLIN OF TODAY”

- Effective against nonpenicillinase-producing staphylococci, beta-hemolytic streptococci, and pneumococci.†

†NOTE: The choice of Tegopen should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates that the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semisynthetic penicillin. The clinical significance of *in vitro* data is unknown.

- 10 times more active against strep than staph.
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‡Maximum absorption occurs when Tegopen is taken on an empty stomach, preferably 1-2 hrs. before meals.



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AUXILIARY

Mrs. Aubrey E. Terry
President, A-MASA

Have An AMA-ERF Year

When it comes to winning in this particular field we certainly have the team that knows how to do it. Since the AMA-ERF program was established in 1962, almost \$85 million in loans have been arranged and guaranteed by the American Medical Association Education and Research Foundation. This is one of the main projects of the Auxiliary — to raise money to be used as unrestricted funds for medical schools, and to provide guaranteed loans to medical students, interns and residents.

AMASA raised \$31,247.79 this past year for medical education in Alabama. Due to the fact that contributors are given the opportunity of designating the schools of their choice, the breakdown is in different amounts. Accepting checks at the convention for use in their respective schools were: Dean James A. Pittman, Jr., Medical College, University of Alabama, Birmingham, over \$21,000 (according to national information this is the 6th largest AMA-ERF grant given to a medical school in the nation for 1977); Assistant Dean Clyde Huggins, University of South Alabama Medical School, Mobile, over \$6,000; and Dean Silas Grant, University of Alabama School of Primary Care, Huntsville, over \$3,500.

The money is raised and given in a variety of ways. We have many fundraising projects and one of the most effective to date seems to be the Christmas Sharing Card. A Christmas idea developed recently in Franklin County is the Sharing Tree to be used in hospital lobbies. This should work well in counties with small memberships. During this past holiday season over \$21,000 was donated by physi-

cians and their spouses to AMA-ERF in lieu of sending individual greetings.

Jefferson-Birmingham was presented the 1977-78 award by Mrs. Donald J. O'Brien, State AMA-ERF Chairman, for the largest total amount per Auxiliary for the state with \$9,636.54 contributed. Other awards were given in two categories:

Counties with membership under 50:

Largest amount per member: Colbert—\$51.71.

Largest increase per member: Franklin—\$27.90.

Counties with membership over 50:

Largest amount per member: Mobile—\$27.28.

Largest increase per member: Mobile—\$4.50.

In past months it is noteworthy that contributors in Colbert County were most generous — this being a fitting memorial for our beloved past AMA-ERF Chairman, Mrs. Howard C. Johnson.

To have an AMA-ERF Year even better than last we must play a year round game — making plans and carrying out activities monthly. With the rapidly rising cost of medical education and dwindling state funds, our schools are looking more than ever for support from the private sector. The need is great. I sincerely hope every Society and Auxiliary will take the AMA-ERF ball and run to reach higher contribution goals than ever before. Only then can we continue to be a 100% winning team.

Hettie

NUCLEAR MEDICINE

The 135 members of the Alabama Society of Nuclear Medicine, recently extended representation on MASA's Interspecialty Council, join with other physicians in the field to mark 25 years of existence as a specialty. A nuclear medicine residency program in Birmingham is proof, where none was needed, that the specialty is firmly entrenched in modern medicine. The following story is a brief overview of the present state of the art. — By Wm. H. McDonald

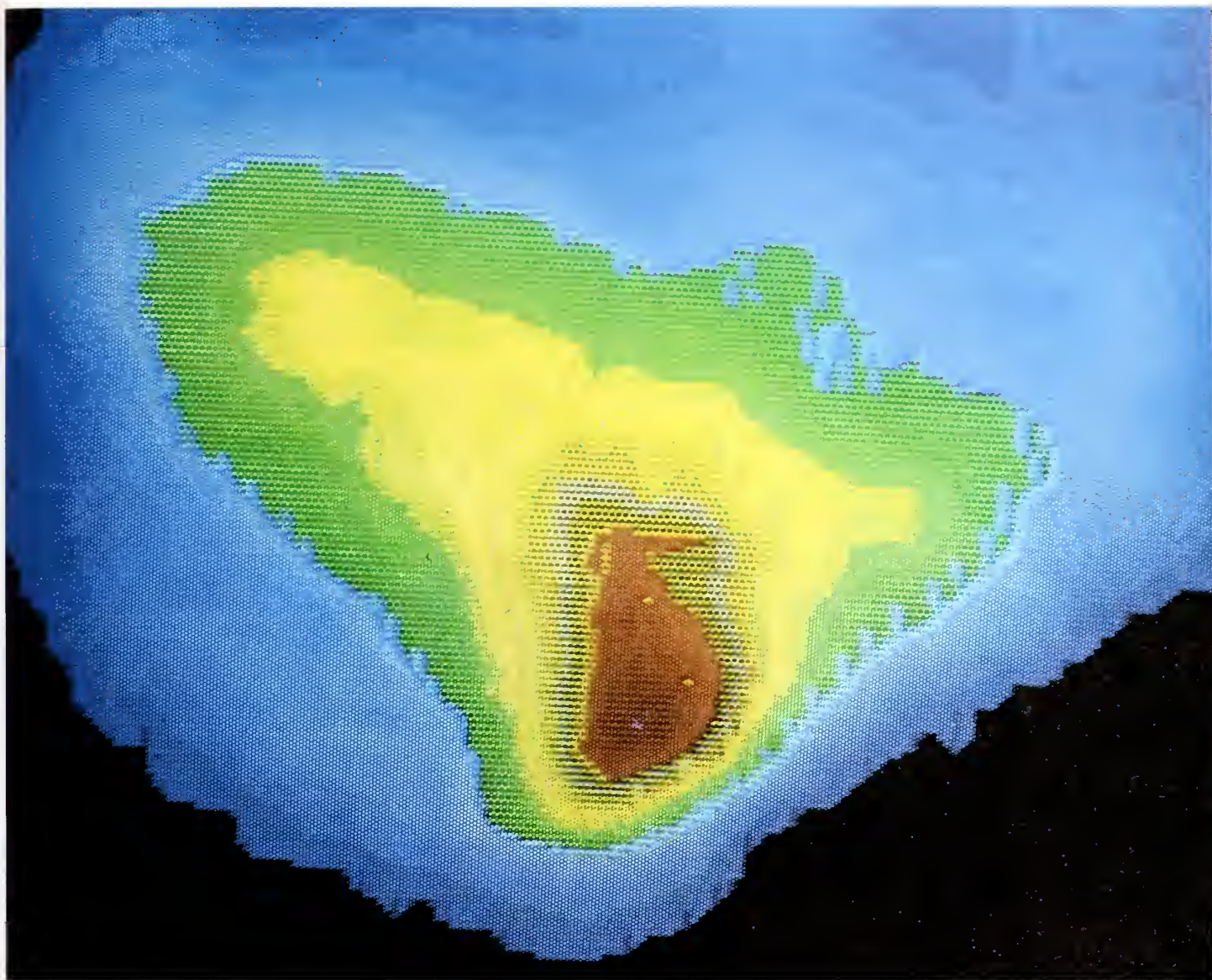


COMPILATION OF RENAL FLOW STUDIES—PHOTO: DR. J. F. DeLONG

Some say that what really founded nuclear medicine was the discovery of the affinity of iodine for the thyroid. But Marshall Brucer, M.D., writing in The 25th Anniversary issue of the *Journal of Nuclear Medicine*, opts for an earlier moment in history:

"In the beginning, a boa constrictor defecated in London and the subsequent development of nuclear medicine was inevitable. It took a little time, but the 139-year chain of cause and effect that followed was inexorable...."

It was in June 1815 when a young chemist named William Prout attended an exotic animal exhibition held on



VARIOUS LEVELS OF HEART ACTIVITY—PHOTO: Wm. H. McDONALD

the Strand on London. A boa constrictor, recently captured in South America, defecated and Prout managed to collect a specimen. Just a year earlier he had isolated the first pure sample of urea — from the urine of patients with gout.

Dr. Prout, who received his M.D. from the University of Edinburgh, is now regarded as the first clinical pathologist, although he wasn't called that at the time.

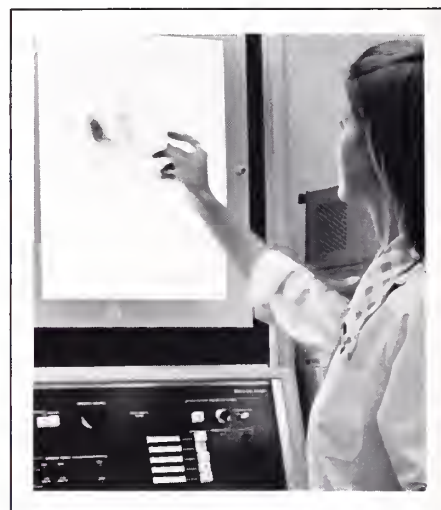
He dissolved the snake's feces in muriatic acid and determined that the insoluble precipitate was almost pure uric acid.

Already the father of clinical path-

ology, he also became, Dr. Brucer writes, the grandfather of organic chemistry. Among other achievements, Dr. Prout was the first man to use iodine in the treatment of thyroid goiter.

Dr. Brucer precedes to illustrate what he regards as the inexorable march of medicine to what is today called nuclear, pausing here and there in his witty, scholarly treatise to recognize the many milestones along the way.

Whenever and wherever nuclear medicine was born, its place is secure in modern medicine, even though it may not always exist as a separate



PHOTOS BY

Rhonda Montgomery
OF THE MASA STAFF

[4]
[5]



[6]

1] Adjusting the gamma camera for a scan. 2] Frame on television display from a wall motion study of the left ventricle of the heart. Dr. DeLong's hand rests on the keyboard of the computer terminal. 3] Checking thyroid scan. 4] Checking the energy spectrum on the scintillation camera console. 5] Dr. DeLong reviews bone scan demonstrating widespread metastatic disease. 6] Automated multi-channel sample analyzer at the well counter. Screen shows an energy spectrum for isotope.

NUCLEAR MEDICINE

CONTINUED FROM PAGE 45

stated specialty. Often, as in the early days of the Society, it is a subspecialty of radiology or pathology, or internal medicine, the three specialties grandfathered into the Society when it was founded.

Radiology and nuclear medicine are not competitive, as James F. DeLong, M.D., director of the department of nuclear medicine at Lloyd Noland Hospital, explains:

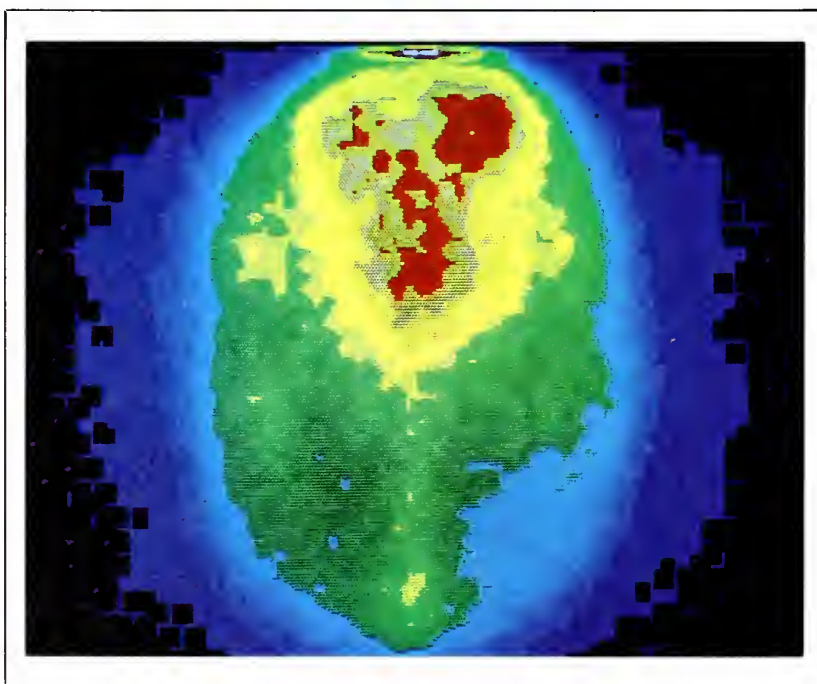
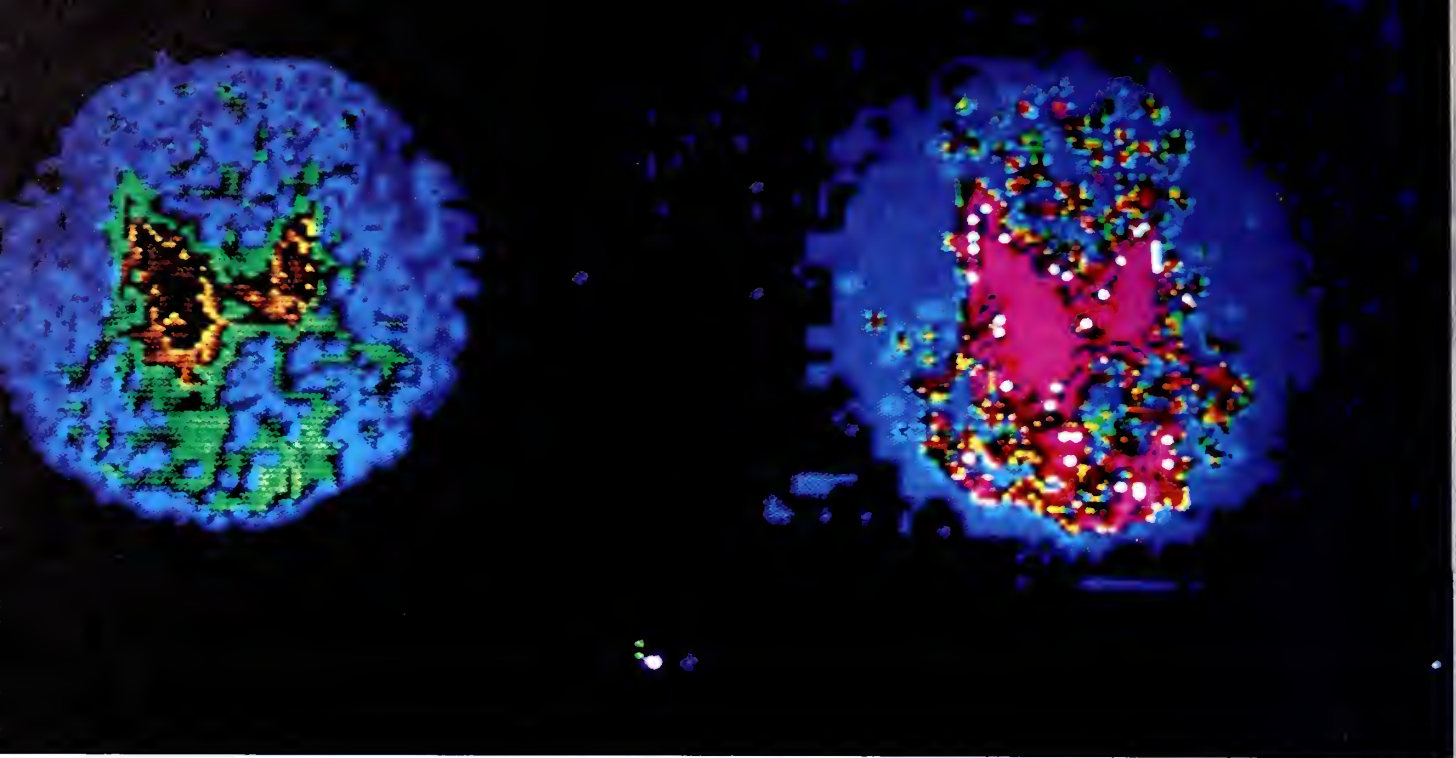
"They are very complementary," he says. "X-rays are *anatomically* oriented; we are *functionally* oriented."

"I cannot give you details of a skull or a vertebra that they can. But I can tell you if that area of the skull or vertebra is sick — if there is some disease process that is going on."

"Two areas we are very big on — cardiology and oncology. In bone scans you have to have 30 to 50%

destruction before you have anything abnormal on x-rays, whereas we can pick it up at 5 to 10%. Bone scans put the final big drive for nuclear medicine."

In a sense, as Dr. DeLong explains, nuclear medicine is a reciprocal of x-rays. Whereas x-rays as projected through the body, nuclear medicine uses injected radionuclides hooked to a drug so that the radiation is from the



[2]

1] Thyroid scan, right lobe (left in picture) is normal, with cold nodule at base of left lobe. 2] Anterior static brain image arterial phase summated blood flow study demonstrating virtually no flow in right middle cerebral artery. — Photos: Dr. James F. DeLong

CONTINUED FROM PAGE 47

inside out, whether from kidneys, lungs, heart, pancreas, brain.

The most useful radionuclides, Dr. DeLong explains, because of their special tagging qualities or affinity for certain tissues, are these:

Technetium 99m (^{99m}Tc), depending on the pharmaceutical it is tagged to, used in lung scanning, liver, kidney, blood pool studies, brain, cine photos as an ion, etc;

Iodine isotopes (^{131}I and ^{132}I), as well as ^{99m}Tc for thyroid studies;

Gallium 67 (^{67}Ga) for tumor imaging and inflammatory lesions.

Thallium (^{201}Tl) is considered an exciting, "hot" item, Dr. DeLong says, useful in myocardial perfusion studies, as an ischemic heart disease.

The Alabama Society of Nuclear Medicine now has a membership of 135, with most of the distinctly labeled departments of nuclear medicine located in hospitals in the larger cities, although the techniques are widely applied throughout the state.

Where nuclear medicine is today is perhaps best described in an editorial in the *Journal of Nuclear Medicine* by Frank H. DeLand, M.D., editor, in an anniversary issue editorial:

NUCLEAR MEDICINE

- The diagnostic contributions of bone and joint imaging have changed the approach to bone disease and particularly to the evaluation of the oncologic patient.
- The universally enthusiastic acceptance of radionuclide cardiology underscores the importance of this procedure in the cardiologists' approach to heart disease.
- Ventilation-perfusion studies provide information on pulmonary and airway status difficult to obtain otherwise, except by invasive means.
- Combined hepatosplenic imaging with radiopharmaceutical colloids offers the unique opportunity to evaluate anatomic abnormalities and indirectly to diagnose changes in portal venous dynamics. Simultaneous studies with two or more radiopharmaceuticals can demonstrate the vascularity or metabolism of hepatic lesions; and with appropriate data processing, differentiation between neoplasm and other mass lesions can be made in nearly every instance. The newer hepatic cell agents offer exciting approaches to the diagnosis of hepatic excretory and cholecystic problems.
- Pancreatic imaging using ^{75}Se methionine (discarded by most departments for good reasons) in frontal tomographic format is now an excellent procedure.
- The measurement of thyroid function, definition of anatomic abnormalities, intrinsic and aberrant, and the treatment of thyroid disorders are firmly established radionuclide procedures.
- The study of renal glomerular and tubular function, detection of urinary obstruction and reflux, and repetitive evaluation of renal transplant status have established renal nuclear medicine.
- Gallium imaging for neoplasia and inflammation has proven its reliability. When the studies are performed with tomography or with the removal of interfering radioactivity by use of multiple radionuclides, gallium imaging is an impressive and valuable tool in these diseases.
- Dacryocystography offers anatomic and physiologic data difficult to obtain by older methods.
- The pathophysiology of cerebrospinal fluid circulation is best measured by cisternography. When the dynamic studies are interpreted in the context of normal physiology, the accuracy of diagnosis is imposing.
- Radionuclide cerebral angiography has proved to be the most sensitive noninvasive procedure for the evaluation of changes in cerebral blood flow at the perfusion level. In cerebrovascular disease, these dynamic studies have twice the sensitivity of contrast angiography and three to four times the sensitivity of transmission axial tomography.
- Although just recently available for clinical application, single emission cranial computed tomography has already demonstrated its capacity to define and to localize neoplasms less than 1 cm in diameter, and to reveal masses in areas that are frequently obscured on two-dimensional brain images.
- And last, but certainly not least, is radioimmunoassay, the procedure that has vastly expanded the understanding and diagnoses in endocrinology and toxicology. □

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MEDICAL OFFICE for lease in Tuscaloosa, with or without equipment. Building is 1½ years old, 1650 square feet, four examination rooms, large reception room; one unit of four-office complex; two medical offices, two dental offices. Fully equipped, if desired, for instant practice; equipment purchase optional. Ten blocks from Druid City Hospital. Separate equipment sale negotiable. Inventory available. Contact: Paul D. Nelson, D.M.D., 601-A Hargrove Road East, Tuscaloosa. Phone (205) 345-7134.

OFFICE SPACE FOR RENT: Mobile Medical Center, Inc., 1720 Springhill Avenue, Mobile, Alabama, has available office space for rent. There are also a limited number of condominium offices for sale. Phone Mr. Loftin, 433-2551 or Mrs. Nichols, 432-2407.

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PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff

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ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

FAMILY PRACTICE—Opportunity in progressive area seeking to expand its medical community. East Central Ala. town with population of 1,000 and 10,000 trade area near a 10,600 acre lake under construction. The 34-bed general hospital is fully accredited by Joint Commission on Accreditation of Hospitals and located less than 2 hrs. from Birmingham, Atlanta and Montgomery. Newly completed Medical Arts Bldg. adjacent to hospital. Invitation to visit with expenses paid will be directed to those qualified. Contact Kerlene Mitchell, (205) 357-2111.

FULL OR PART-TIME PHYSICIAN—Preferably internist to work in adjudicative medicine in the Division of Disability Determination, State of Alabama, in the Birmingham office. Work involves reviewing claims for Social Security Disability, teaching and consultations. Salary open. Work requires no patient contact and disabled physicians are invited to apply. Send curriculum vitae to: John A. Shelton, Director, State Department of Education, Division of Disability Determination, 2800 Eighth Avenue, South, Birmingham, AL 35233.

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Before prescribing, please consult complete product information, a summary of which follows:

The effectiveness of Valium (diazepam) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets in children under 6 months of age; known hypersensitivity; acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

ORAL: Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients, should not be employed in lieu of appropriate treatment. When using oral form adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE: To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling, and, rarely, vascular impairment when used I.V. inject slowly, taking at least one minute for each 5 mg (1 ml) given, do not use small veins, i.e., dorsum of hand or wrist, use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest, concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea, have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status.

Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals under careful surveillance because of predisposition to habituation/dependence. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less), prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence, can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), i.e., phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function; avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

INJECTABLE: Although promptly controlled seizures may return, readminister if necessary, not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported, should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, have been observed in patients during and after Valium (diazepam) therapy and are of no known significance.

INJECTABLE: Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

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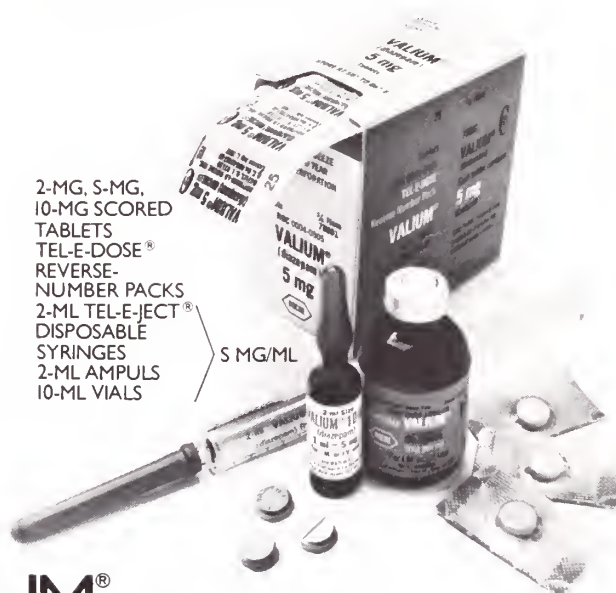
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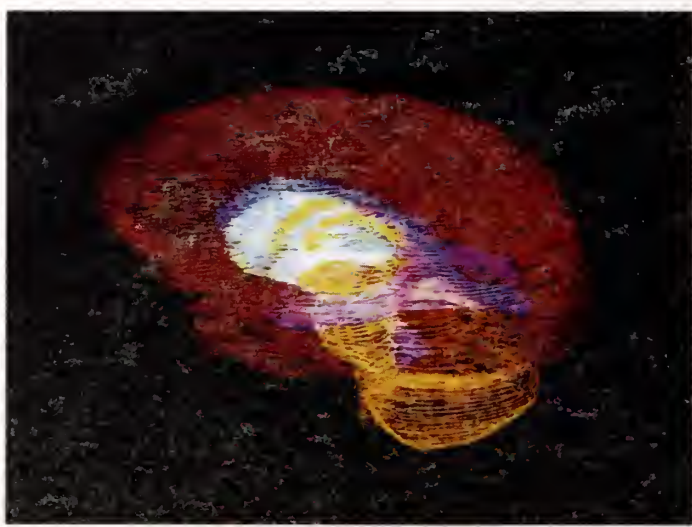
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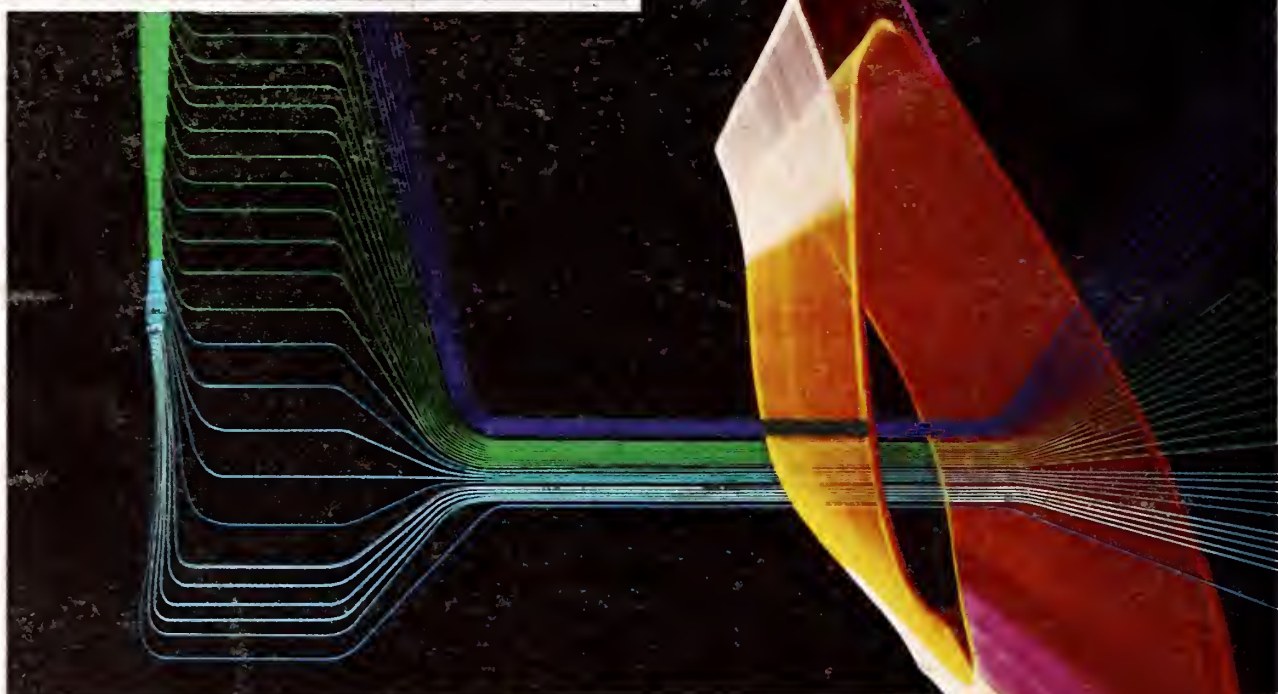
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Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over-sedation.

Side Effects: Drowsiness, confusion, diplopia,

hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

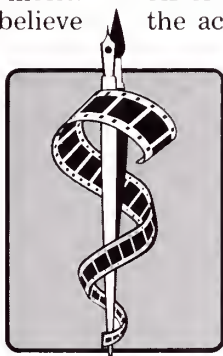


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ABOUT THE COVER

Aimee Watson, four-year-old daughter of Rhonda Montgomery of the MASA staff, is not—repeat not — an abused child. But this picture, one among dozens her secretary-photographer mother has made of her, *looked* abused to Phyllis Smith, the talented chief of Production & Design for the Journal. Ars gratia artis, Ms. Smith said, swiping the picture from Ms. Montgomery's display shelf. Photograph: Rhonda Montgomery. Inside line drawings from the photograph: Phyllis Smith.

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Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

Copy Changes: When an author receives a galley proof back from MASA, he is expected to make corrections only. Copy changes, alterations on proof from the original manuscript, are expensive. Please try to say what you mean in the original.

Length of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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FROM THE EXECUTIVE DIRECTOR

SECOND OPINIONS

By the time this appears, HEW's publicity campaign to "educate" patients to the right to a second opinion in elective surgery will have been launched, as promised by the government last June.

Of course, as all physicians know, the right to a second opinion is about as old as medicine. It has always been freely given when needed and sought by the patient.

But MASA didn't ask for the HEW-sponsored program. It was faced with the choice of participating, representing all Alabama doctors fairly (as other medical associations are doing in all parts of the nation), or leaving it to the bureaucrats, who are not notably sensitive to the doctor-patient relationship.

The implementation agreed upon by the Board of Censors, after careful deliberation in its regular August meeting, disallows any closed panel of hand-picked physicians. All actively practicing physicians, who have not been found guilty of Medicare or Medicaid fraud, are eligible for the list, which will be held by Alabama Medical Review, the state's PSRO.

The list is not limited to Board Certified surgeons, or even to surgeons. All licensed, practicing doctors may participate, if not disqualified by the reason above.

The patient is assured of the option, if he chooses, of selecting his own physician for a second opinion. Or he may, of his own free will, ask AMR's hot line for the names of some physicians near him, from which he may pick one.

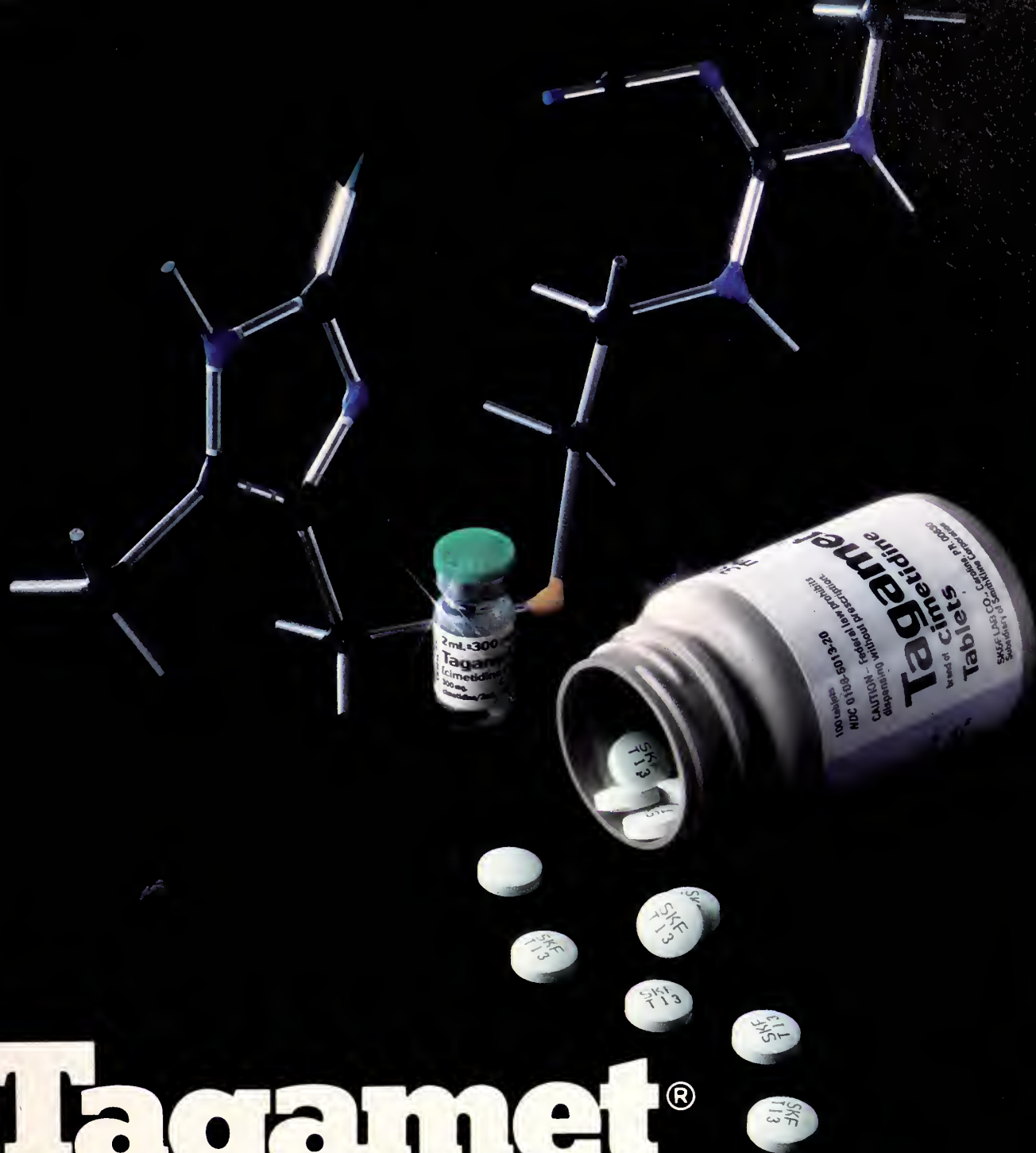
It's all voluntary. No patient or doctor will be penalized for participating or not participating. If a patient is satisfied with the first opinion — as the overwhelming majority will be if the experience of other states is any guide — that's that.

This is a positive response by MASA to the very real threat that the federal government (as well, it now appears, as some insurance companies) might attempt to make second opinions mandatory and specify which physicians must be used for them.

As distasteful as the Board of Censors found the task of making a historic right of patients a formal program in cooperation with the federal government, there was simply no alternative.



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WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is

affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

PRESIDENT'S MESSAGE

Mutual Assurance: Your Best Investment

Hiliary H. Henderson, Jr., M.D.
President



The physicians of Alabama didn't get into the professional liability insurance business because we wanted to. When all the commercial carriers served notice they were pulling out, or refusing to write new coverage, we had no choice but to form our own company.

You couldn't have practiced without it. Stop and think: Would you be practicing in Alabama today if Mutual Assurance Society had not been formed to provide you coverage no one else would sell you at any price?

Although there is some evidence that commercial carriers are again testing the water in this and other states, how long will they stay this time? They could pull out again, with little or no notice, and leave you bare again.

At present, Mutual Assurance premiums may be higher than commercial premiums. That was inevitable: We had to do our own capitalization. Commercial insurers already had theirs. In time, our premiums will come down. Certainly they will if we continue to have the good loss experience we have had in the short life of Mutual Assurance.

It is our company. We own it, we control it. The profits that will one day be realized from it will not go to stockholders in other states, as is the case with commercial carriers. They will be returned to us, one way or another.

Many doctors active in physician-owned insurance companies in other states say they are now realizing the malpractice crisis was a blessing in disguise. It forced physicians to insure their own profession, as they probably should have been doing all along.

Over the long haul, as over the short haul, there is no question that Mutual Assurance is a splendid investment — a personal investment and, beyond that, a professional investment.

I think it is a wise one and I would warn physicians who may be tempted by the siren song of the commercial carriers, as they tiptoe back into the state to skim the cream, that they left you before and they may leave you again. But whether they do or not, the soundest investment for the future, a future we can build on, is our own company.

Many of your officers worked long and hard to establish it, traveling many thousands of miles to confer with other medical associations in the same boat as we found ourselves in.

They agonized over all the knowns and unknowns. They conferred with the best insurance professionals. The company they produced after many months of hard work has been hailed across the country as perhaps the best, most efficiently managed professional liability insurance company there is.

And by the natural processes of growth, it will be even better in the future. I believe that and I ask you to examine what I have said and decide for yourself.

Hiliary H. Henderson Jr.

How to get into ‘78 medical school

By James A. Pittman, Jr., M.D.
Dean, University of Alabama
School of Medicine,
UAB, Birmingham

The scene is familiar. It is a reception, symposium, county medical society meeting, hospital staff meeting, or some similar gathering. I feel a tug at my coat sleeve and turn to see an elderly gentleman who looks vaguely familiar, but I just can't recall his name. However, he obviously remembers mine.

"Jim, old boy," he begins. "You remember me, Dr. Josiah X. Xanudu. I graduated from the Middlesex Medical School in 1932, served honorably in the army in Louisiana, then settled in Alabama to practice. Now, I have a nephew who wants to go to medical school to keep up the family tradition. He is not too bright with books, but he's a fine boy! Not really a nephew, I guess, but the son of a second cousin. In fact, his greatgrandmother was the fourth cousin once removed of the first wife of a famous governor of Alabama. His grades aren't too good, but he's a fine boy and would make a fine doctor. You'll get him in, won't you?"

At that point we get down to the details. Such conversations often occur around January or February, and the questioner wants to know "how to get my nephew into medical school this year" (i.e., the coming summer). Of course, the deadline for filing applications has long since passed and the admissions process is at least half over at that point.

But the main problem with such conversations is that they reveal a great lack of comprehension of the admissions processes of United States medical schools in the late 1970s. The basic assumptions (1) that it is largely a political process, and (2) that the dean is the sole one making the selections are relics of the past.

One fact of the current times is the

transformation of almost everything into not just a legal transaction but one fraught with possibilities of litigation. Medical school admission is currently a highly litigious activity. The Bakke case is only the most famous of many legal challenges to individual actions of medical school admissions procedures. Over the past 5 years I have, as a medical school dean, been sued twice by unsuccessful applicants to medical school (not counting a number of suits by dismissed students), been investigated once in general terms by the DHEW (Department of Health, Education, and Welfare), been subjected to one "in-depth audit" by DHEW regarding admissions procedures, and been threatened a number of times with potential legal action.

The DHEW in-depth audit was triggered by a disappointed applicant from out-of-state, and it must have cost the school at least \$10,000 or \$15,000, as a conservative estimate, to satisfy the DHEW auditors (by which time the applicant had achieved admission to a medical school in another state). In such circumstances, it is not surprising that medical school admission procedures have become rather rigid and fixed by various formulas.

School of Medicine Admissions Process

The procedure at the University of Alabama School of Medicine is as follows: First, around May and June, the Director of Admissions, the Deputy Dean, and I sit down to prepare a list of potential committee members to serve on the Admissions Committee. This simple act has itself recently become the topic of some controversy and discussion. Should this list contain only members of the full-time faculty

at the medical school (on the theory that the faculty, to be responsible for the final graduating product, must control selection of the "raw material")? Or should it be more broadly representative of the community? Or should it contain people in practice intimately familiar with the demands of the practice of medicine and the needs of the community? Should it contain students? And so on.

Over the past few years we have opted for a committee which has a large portion — about half — of full-time faculty members, from both the basic science and clinical departments, with representatives from the Huntsville and Tuscaloosa campuses, plus two students from the last two years of medical school, with the remainder coming from physicians from around the state. In addition, there have recently been one physician's wife and one minister. We try to strike a balance with representation from blacks and women, though it is often difficult to find people who can serve. The practicing physicians deserve special expressions of appreciation, since the committee meets all day from 8:30 a.m. until 6:00 p.m. (or later) every Thursday from August through April, they must travel to Birmingham weekly, and they receive no compensation for this service. And there may be additional harassments. One diligent applicant several years ago drove all around the state and personally visited each member of the Admissions Committee at his or her office or home.

The Office of Admissions, in addition to its responsibilities for the activities of the Admissions Committee and all the associated records, audits, etc., is very active throughout the year visiting college campuses around the state trying to recruit the very best students, particularly black students, to apply to Alabama. Junior and senior college students are encouraged to visit the campuses at Birmingham, Tuscaloosa, and Huntsville to learn more about medicine and medical school. During 1977-78 we established in the medical school at UAB an Office of Minority Student Affairs, headed by Mr. Marvin Holloway, to promote and facilitate re-

cruitment and retention of students from disadvantaged backgrounds, particularly minority students, and this office is helpful in orienting black premedical and entering medical students to medical school and its rigors.

The student then obtains an official "AMCAS" application form from the Office of Admissions at a medical school or from his college medical school admissions adviser, fills this out, and sends it to the AMCAS office in Washington, D.C. "AMCAS" stands for "American Medical College Admissions Service," a nationwide operation run by the AAMC (Association of American Medical Colleges) out of Washington, D.C. This application must be accompanied by payment of \$25 to AMCAS, which permits identical application forms to be sent to up to 4 medical schools. Applications to additional schools cost \$10 each, limit-

"The main problem is a great lack of comprehension of the admissions processes . . . The basic assumption is that it is largely political and that the dean is the sole one making the selections . . ."

ed only by the total number of schools in the U.S., currently 120 schools. The application includes information on educational and personal background, a photograph, academic performance (grades, or "GPAs" for grade point averages), and a brief essay by the applicant.

The Admissions Office reviews each application to make sure it is complete, then schedules the students for interviews. Essentially all Alabama applicants are scheduled, even though some may be marginal in their credentials. Only the most outstanding of all the out-of-state applicants are scheduled, and usually those have some sort of relation to Alabama (born here, grew up here, have close relatives here, etc.). The details of the interview process have been described in a recent article by Dr. Henry H. Hoffman,

Director of the Office of Admissions, University of Alabama School of Medicine¹.

Following the interviews, which may continue on into February or even March of the year of matriculation, acceptances for admission are sent out in groups on the following dates: Oct. 1 (for "early decision" applicants, a small group of in-state applicants selected because of their place of residence and their academic excellence), January 15, February 15, March 15, and April 15. Thereafter there may be a few places remaining, or additional places may be created by the withdrawal to go elsewhere of a very few students who had originally "accepted our acceptances." On rare occasions, some students have even been admitted in July after classes have begun, a place having been created by the withdrawal from medical school of someone who found, "It's just not for me" (for example, dealing with a cadaver²). In general, the bulk of the positions in the class have been assigned by mid-March, surely by mid-April, each year, to begin school the following July 1 or thereabout.

How To Get Into Medical School

As with everything else, there is a book about this, which is entitled *The Medical School Game: A Quest for the Fat Envelope*³. The implication is that a *fat* envelope contains the acceptance for medical school, with all the attendant forms, directives, etc., while a *thin* envelope just contains a simple letter of rejection. People like Dr. Josiah X. Xanudu mentioned above need to understand that there are currently *five basic criteria* for decision as to who gets into medical school and who does not:

- Overall GPA (grade point average)
- GPA for BCPM (Biology, Chemistry, Physics, and Mathematics)
- MCAT scores (on Medical College Admissions Test)
- Letters of reference, particularly from one's college
- Interview

Note that the first three of these are numerical and not subject to much manipulation by committees or any-

NUMBER MATRICULATED OUT OF NUMBER APPLIED

	Alabama Residents	%	Nonresidents	%	Total %
1977	$\frac{161}{530}$	(30.4)	$\frac{4}{561}$	(0.7)	$\frac{165}{1091}$ (15.1)
1976	$\frac{158}{522}$	(30.2)	$\frac{7}{408}$	(1.7)	$\frac{165}{930}$ (17.7)
1975	$\frac{142}{487}$	(29.2)	$\frac{3}{505}$	(0.6)	$\frac{145}{992}$ (14.6)
1974	$\frac{119}{471}$	(25.2)	$\frac{6}{778}$	(0.8)	$\frac{125}{1249}$ (10.0)
1973	$\frac{122}{466}$	(26.2)	$\frac{3}{924}$	(0.3)	$\frac{125}{1390}$ (8.9)
1972	$\frac{115}{391}$	(29.4)	$\frac{10}{832}$	(1.2)	$\frac{125}{1223}$ (10.2)
1971	$\frac{114}{300}$	(38.0)	$\frac{11}{702}$	(1.6)	$\frac{125}{1002}$ (12.5)
1970	$\frac{94}{268}$	(35.1)	$\frac{11}{470}$	(2.3)	$\frac{105}{738}$ (14.2)
1969	$\frac{97}{266}$	(36.5)	$\frac{3}{377}$	(0.7)	$\frac{100}{642}$ (15.6)
1968	$\frac{77}{228}$	(33.8)	$\frac{10}{468}$	(2.1)	$\frac{87}{696}$ (12.5)
1967	$\frac{79}{214}$	(36.9)	$\frac{4}{233}$	(1.7)	$\frac{83}{447}$ (18.6)
1966	$\frac{77}{194}$	(39.7)	$\frac{4}{267}$	(1.6)	$\frac{81}{441}$ (18.4)
1965	$\frac{72}{211}$	(34.1)	$\frac{8}{177}$	(4.5)	$\frac{80}{388}$ (20.6)
1964	$\frac{75}{211}$	(35.5)	$\frac{5}{125}$	(4.0)	$\frac{80}{336}$ (23.8)
1963	$\frac{77}{190}$	(40.5)	$\frac{3}{99}$	(3.0)	$\frac{80}{289}$ (27.7)
1962	$\frac{79}{158}$	(50.0)	$\frac{3}{132}$	(2.3)	$\frac{82}{290}$ (28.3)
1961	$\frac{75}{161}$	(46.6)	$\frac{5}{114}$	(4.4)	$\frac{80}{275}$ (29.1)

body else. One can argue about how much they mean, how much weight they should be given, and the like; but the numbers themselves are pretty cut and dry.

The average GPA of all students admitted to our medical school over the past several years has been about 3.5 out of 4.0, or approximately a B+. Some years it has been well above 3.5. It is very difficult for students with GPAs less than 3.0 to gain admission. The average GPA for all students in BCPM has been about the same. The MCAT scores have been discussed elsewhere by Dr. Hoffman¹, but suffice it to say that MCATs of Alabama students are well below the national average and are among the lowest in the United States, though they have risen slightly in rank order over the past few years.

Students with very low MCAT scores tend to have academic difficulties in medical school and, therefore, are relatively high risks for flunking out. Some students argue that "those tests shouldn't apply to me," but that argument is with society as a whole,

not the medical school, since society as a whole insists that professionals in general and physicians in particular successfully pass such tests in order to obtain licenses to practice. There are at least two graduates of the University of Alabama School of Medicine who have been unable to practice medicine following internship even though out of medical school several years, because they have been unable to pass such standardized examinations.

The letters of reference have a more clearly subjective element and tend to be regarded with caution by the Admissions Committee. The staff of the Admissions Office have very high regard for letters from student advisors at some colleges, who seem to take great care in preparing the letters, who do not describe all their graduates in unqualifiedly glowing terms as "the best ever graduated," and who in some cases even rank their own graduates as to probability of doing well in medical school and thereafter. Unfortunately, some colleges are less objective in the promotion of their own graduates — a nice attitude of support, but not one

Dean's Report

which gets much results. Letters of a more obviously political nature, while not without value, tend to be viewed as just that and not to carry as much weight with the Committee as letters from local physicians or from college teachers.

The interview is the largest imponderable in the whole process. Nobody seriously wants to drop it, since it probably affords the best opportunity to estimate the personality of the applicant directly. The interview actually consists of three separate interviews by three members of the Admissions Committee, usually all on the same day. Probably the best advice one can give prospective applicants about the interview is, "Be yourself." While the interview is seen as essential, it is also seen as highly imprecise and subjective. Although the subjective is exactly what the interview is supposed to assess ("Will this applicant become a compassionate physician, or is he ruthless?" "Does he give evidence a sympathetic attitude toward people in need?"), it is also the basis for uncertain degrees of unfairness.

We have therefore tried several times to structure the interviews or to eliminate them completely in favor of a formula-driven system. However, we have never been able to completely eliminate the interview, and once that element is introduced into the equation, all other efforts to be quantitatively rigorous evaporate into a fog. The fact remains, however, that students who enter medical school must be able to handle the highly technical information, concepts, and skills of modern medicine, and students who have academic difficulties in college or on standardized tests like MCAT tend to have troubles in medical school.

Competition for Admission

A major problem facing any individual applicant to medical school in the United States today is the excellence of the competition. Despite the various problems and assaults being made on medicine today, it remains the most popular of all the professions among college students. Nationwide

only about one-third of all the applicants in any one year gain admission, though some of these are reapplicants. In Alabama the ratio is slightly less than this, considering both UAB and USA (the University of South Alabama in Mobile). UAB stakes 165 students per class for all its campuses and USA takes 64 per class. UAB is requesting accreditation for 210 per class, and USA for 96 per class, but these have not yet been approved and may not be for some years, pending adequacy of operating funds and facilities. Only about one-sixth of all applicants are admitted to UAB. The ratios of applicants to entering class size are given in the accompanying table. The total number of acceptances offered in recent years to fill the classes at UAB

have been about 110% and 115% of the entering class size.

Conclusion

The proper advice to Dr. Josiah X. Xanudu, therefore is: Tell your nephew that it's really his responsibility to get into medical school. And tell him the following:

- Get into a good college and study hard from the outset; make good grades in all years.
- Take hard courses in BCPM (biology, chemistry, physics, and math) as well as the "crip courses."
- Learn how to take standardized examinations and do as well as possible on the MCAT exam; if you do poorly, take it again.

- Engage in enough extracurricular activities to get some good letters of recommendation from someone besides the physics teacher, though you'll need one from him, too. Summer work in a medical setting is traditionally a help and will probably continue to be a help in the future.
- Be yourself in the interview. □

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1. Hoffman, Henry H.: Admissions — Class Entering July 1977. Alabama Medical Alumni Bulletin, 3:10-11, 1977.
2. Goldberg, M.: The Anatomy Lesson. New York, G. P. Putnam's Sons, 1974.
3. Simmons, David: The Medical School Game: A Quest for the Fat Envelope. New York, The Drake Publishing Co., 1972.

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LETTERS

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Editor, The Journal:

In response to the critical letters about Dr. Lumpkin: For every negative letter received criticizing Dr. Lumpkin's article, there are probably 500 physicians who couldn't agree more with Riley.

Historically, journals which reach the better educated, more scientifically minded people carry articles which provoke discussion.

Regardless of the content, the publishing of an article which provokes thought, criticism and subsequently critical analysis is to be commended.

If there were more physicians who had a sound philosophical and theological basis for their scientific practice of medicine and for the conduct of their personal lives, the entire profession would be better off.

John L. Buckingham, M.D.
University of Alabama
In Birmingham

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Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established. **Precautions:** The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

Usual Dosage: Adults: 250 mg. q. 6h.


Children: 50 mg./Kg./day in equally divided doses q. 6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

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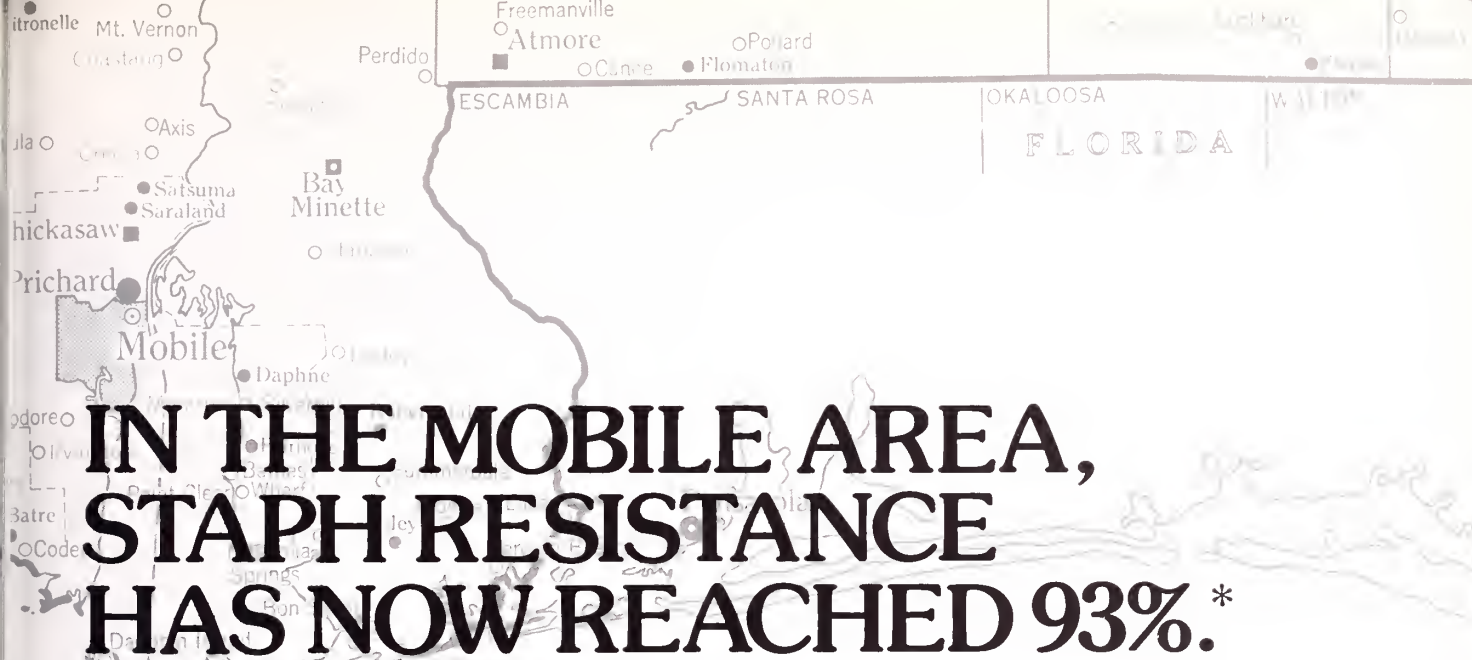
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*resistance to penicillin G among community-acquired staph infections. Data on file, Bristol Laboratories.

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Child

By BEVERLY W. BOYD, M.D., M.P.H.

Medical Director, Bureau of Maternal and Child Health

Child abuse is now becoming a major issue of concern for our society. The true significance of this phenomenon is illustrated in the following statistics:

The majority of reported cases of child abuse are in children under the age of three. Although there is a significant lack of clarity as to the real incidence of child abuse, estimates range from 70,000 to 2 million cases per year. Ten percent of emergency room trauma in children less than 3 years of age is inflicted rather than accidental. Thirty percent of fractures in children under 2 years of age is nonaccidental. An abused child returned to his home without proper therapeutic precautions being taken runs a 50% chance of repeated abuse and a 10% chance of death. Deaths from child abuse are estimated to number 2,000 per year nationally. Mortality rate from abuse for the child aged 1 to 6 months is second only to that from sudden infant death syndrome; for children aged 1 to 5 years, abuse is second only to true accidents as cause of death. Finally, there are social costs of allowing child abuse to go untreated. Abused children often grow up to be socially destructive and are likely to become abusing parents themselves.

Many Shortcomings

There are many deficiencies in the community process of managing child abuse cases. The social service system for child abuse is fragmented, uncoordinated, and lacks focus.

Local child protective agencies, police, juvenile courts, hospitals, and a variety of other public and private agencies waste manpower, expertise, record keeping, and administrative planning through failure to coordinate and communicate.

Several problems exist. First, training of protective services workers is insufficient, and investigations of child abuse are often poorly performed. Workers are usually required only to have a college degree and a few weeks of training. Second, detection and reporting of child abuse are haphazard and incomplete. In most communities there

Prevention & Treatment A Community Project

Abuse

Mobile County Health Department

is no organized communication system to provide professionals and lay people with needed information about child abuse. Third, suitable treatment programs do not exist. Few mental health facilities provide help for abused children and families. Care for abused children and their families lacks continuity. Fourth, the existing system may give only a paper promise of help. Few resources are available on the community level for the support of the abused child. Funding for care of abused children and their families is inadequate.

A startling indictment of the current social service system for child abuse is found in the following fact: three-fourths of those children who die in circumstances in which abuse is suspected were known to the authorities before their deaths. Finally, abusing parents are more often persecuted than helped. Our society's perception of child abuse and the abusing parent results in a labeling and stigmatizing process. Child abuse is not a psychiatric disorder in the usual sense of the word. Less than 10% of abused children have parents who are seriously mentally ill. A better perspective is obtained if child abuse is understood as abnormal parenting behavior, a distorted, disordered pattern of child rearing. As long as child abuse is viewed as a form of radically deviant behavior and as a symptom of pathology and sickness, this stigmatizing process will continue. Even families reported for abuse and later cleared may remain permanently under suspicion by the community. The community must realize that all of us have the potential to act in ways which we identify as deviant.

Four Components

Correction of these deficiencies involves four components: creating an informed and aware citizenry; creating an informed and concerned professional community; ensuring adequate public funding for the program; and developing community resources to strengthen the family and to provide help with periods of stress. The community should give the following five objectives priori-

ty: (1) Recognition and diagnosis of child abuse (2) Reporting child abuse to appropriate agencies as required by state laws (3) Recognition of factors in the family which suggest a potential for abuse, with the goal of prevention (4) Development of a comprehensive management program to provide parents with the necessary support and therapy to enable them to cope with the causes of their behavior and to provide children with the necessary treatment, follow-up, and rehabilitation to ensure normal development (5) Awareness of problems encountered in the course of management. It is never the community's responsibility to assign guilt.

Providing the community with the necessary information to identify child abuse is crucial for its management. A variety of professional and nonprofessional individuals who serve or have direct contact with children may identify cases of child abuse. There are certain clinical findings which are suspicious for child abuse. Certainly most of these can occur accidentally; however, their presence indicates more intensive investigation and observation. (See Chart On Page 16)

There are also certain circumstances which should arouse suspicions of child abuse. These are (1) a discrepancy between the history and the degree of physical injury; for example, a 4-week-old infant cannot roll under the mattress and fracture his ribs. (2) a prolonged interval between the occurrence of an injury and the seeking of help; (3) a history of repeated trauma treated in different health facilities; (4) an inappropriate response of parents to the advice of the health personnel; one illustration is the abandonment of an injured child in an emergency room.

The great majority of child abuse cases are first seen either in a physician's office or in an emergency room, and it is imperative that these places be equipped to deal with the problem. Finally, there are behavioral characteristics of abusing parents and abused children which should be recognized. Abusing parents may be evasive and contradictory concerning the circumstances of the



Child Abuse

BE SUSPICIOUS OF:

1. Evidence of frequent or multiple injuries. Frequent injuries in an "accident prone" child are suspicious. Injuries to multiple body surfaces and/or injuries in various stages of healing suggest repeated abuse.
2. Strange injuries (bites, cigarette burns, rope marks, gag marks).
3. Failure to thrive (height and weight well below percentiles normal for age) or evidence of malnutrition.
4. Major, clearly demarcated second and third degree burns. (It is interesting to note that about 10% of cases of physical abuse involve burns).
5. Injuries around the eyes or the mouth.
6. Subdural hematomas and/or skull fractures.
7. Fractures in children less than 3 years of age, including rib fractures and long bone fractures.
8. Ruptured internal organs.
9. Trauma to genital and perineal areas.
10. Advanced unattended disease.
11. Any child dead on arrival.

child's injury or may fail to volunteer any information at all. They may be critical of and angry with the child for being injured and demonstrate little concern about the injury, its treatment, or its prognosis.

The abusing parent seldom touches or looks at the child and shows an inappropriate or no response to the crying child. The abused child either cries hopelessly under treatment or examination or cries very little. Such a child does not look to his parents for reassurance and is wary of any physical contact with adults. The abused child is usually constantly on the alert for danger. For the school-aged child, a review of school records can be helpful. The abused child may be habitually truant or chronically late for school; or the child may arrive at school early and remain late. An abused child may come to school inappropriately dressed for the season. A child who always wears long sleeves may be concealing the marks of abuse.

All 50 states have child abuse reporting laws, and all members of the community should know the contents of their state's legislation. There is variability in the definition of "abuse," with the national trend toward broadening the definition.

All states *require* physicians to report cases of child abuse; 34 states require nurses to report; 25 states require social workers to report; 24 states, teachers; and 9 states, police officers. Sixteen states require reporting by any person who has reasonable cause to suspect child abuse.

All states *permit* reporting by any citizen. Immunity from liability for reporting cases is a universal feature. Most states have a central register for information on all reported cases of child abuse. The majority of states have provisions for some form of penalty for failure to report, ranging from a simple misdemeanor to one year in prison or a \$100 fine.

Community Process

Prevention of child abuse is a community process which is closely related to the community's respect for and value of children. Preventing child abuse depends on preventing transmission of the kind of social deprivation which contributes to a rising population of next generation parents who will not know how to nurture their children.

To prevent child abuse, attention must be paid to the distribution and quality of such social services as housing, health care, and counseling, as well as opportunities to compete for the essential

goods of society. Prevention involves addressing cultural traditions, social values, and economic realities which exert a deleterious impact on the family's ability to protect its offspring.

Examples of preventive measures are the Early Periodic Screening, Diagnosis, and Treatment programs (E.P.S.D.T.) which are available to Medicaid eligible children and contain a specific component for recognition of indications of child abuse.

Also, some communities sponsor family life education (e.g. "Preparation for Childbirth," "How to be a Parent," etc.) or other educational programs aimed at strengthening family life. Efforts to design and validate a questionnaire with the goal of uncovering parents who have the potential to abuse their small children are now going forward in a number of institutions. Such predictive instruments, when available, will help to identify children and parents at risk before an episode of serious abuse occurs. Certainly, efforts to broaden the dissemination and utilization of knowledge concerning child abuse to professionals and lay people must continue as the keystone of prevention.

Inadequate Funding

The principle on which management of child abuse is built is that services should be made available to affected families. The reality is that the actual funds available for implementing these services usually is nowhere near the existing demand for services.

Treatment of child abuse is a community process, and a necessary prerequisite is adequate funding for a comprehensive management program. The first step in treatment is enhancing public awareness of child abuse so that the community is willing to support the needed treatment programs. There are two goals for a community-based program for treatment of child abuse: (1) the social system must create an understanding atmosphere, even though further abuse is not condoned. (2) 75% of abused children should be residing safely in their homes within one year after the report of the abuse. Temporary foster care may be necessary during the treatment process, but separation of the parent and child should never be the goal of a child abuse management program.

There are *two* victims of child abuse — the child and the parent. Treatment is directed toward the parent to recognize the abusing parent's need for nurturing and parenting. Abusing parents are ca-

pable of loving their children and they often feel very guilty and remorseful about their abusive behavior. It is helpful to examine closely the interactional context of child abuse.

Figure 1 shows this interaction and the interplay of three sets of variables — cultural variables, personality variables, and situation variables. Cultural variables are those patterns of behaving which have been acquired by the parent and the child through the process of socialization. Personality variables are the biologic and psychologic characteristics of parent and child. Situation variables are environmental factors over which the individual has little or no control; these include the economic, political, geographic, religious, and family aspects of the individual's life and the social setting for interaction.

Role Reversal

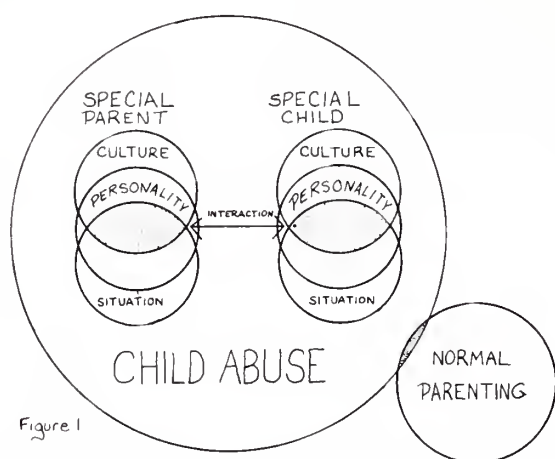
Probably the most important cultural variable for the abusing parent is the phenomenon of "role reversal." The common denominator of parents who abuse their children is that these parents perceive their infants not as babies, but as organized humans capable of sensing their (the parents') own needs and meeting them. The parent is greatly disappointed because the child has been unable to fulfill his (the parent's) own nurturing needs adequately.

Role reversal consists of three components: the parent feels like a child looking for parental help to assuage his emptiness; the parent believes that children can gratify this need; the crying child reminds the parent of earlier criticism and scoldings for failure, and the child becomes an attacking figure which arouses parental anger.

Another important cultural variable is the concept of discipline. Abusing parents confuse discipline with the expression of their own frustrations. They use physical punishment not to reinforce principles of behavior, but to relieve their own anger and anxieties. Finally, the prevailing cultural tolerance for violence has influence on the parent's behavior.

The most important cultural variable for the child is the abused child's ongoing process of socialization. The child who is a victim of abuse tends to learn the pattern of aggressive discharge to cope with anxiety—i.e., the pattern his parents exhibit toward him. This pattern of behavior can be repeated from generation to generation and

INTERACTIONAL CONTEXT OF CHILD ABUSE



result in repeated transmission of abnormal parenting techniques.

All Levels of Society

Personality variables include age, sex, race, and other physical attributes, as well as self-conceptions and capacities. Abusing parents come from all levels of society and all socio-economic, racial, and religious groups. Mothers and female caretakers are the most frequent abusers because they are generally the primary caretakers. Abuse by fathers or male caretakers results in more serious injury to the child. The abusing parent may be young, single, or addicted to alcohol or drugs.

Abusing parents are often described as being "dependent." They were inhibited in their own independent maturation and development by their own upbringing. They do not have good judgment about what to do and how to do it in life. They have a high need for assurance as a result of not having adequate confidence in their own knowledge of what is best to do. There is significant inability to plan for the future. Problems are managed by finding short-term solutions which may take care of the immediate situation but which have little useful bearing on long term success.

Another important personality variable is social isolation. Abusing parents show little integration in the community and have few group associations. Many exhibit a lack of basic trust and reluctance to seek help. They learned in their childhood not to rely on their environment for appropriate sympathetic responses to help them survive and meet their needs, and they are suspicious of those who now offer help. Such parents are alienated from each other, are isolated from friends, and are

unable to turn to others for emotional support in times of stress. Ninety percent of these families have serious social problems such as marital discord and financial difficulty.

Important Variables

Personality variables of the child are important in the parent-child interaction. Abused children are generally not different from other normal children although they are often perceived as different by their parents. However, children who truly are different (e.g. chronically ill or handicapped, hyperactive, cry excessively, have repeated minor illnesses) may be difficult to manage and thus be more likely to be abused. Any child who is difficult to satisfy or who makes many demands on the parent is more likely to be abused.

Situation variables are similar for both parent and child. Crime, poverty, family size, unemployment, a move to a new community, and inadequate housing tax a parent's emotional resources. Another situational variable is the religious climate for parent and child. Some religious groups may believe that God expects them to vigorously punish their children in order to raise them correctly. Many child abuse laws have special clauses to protect the child from such religious practices.

An important situational variable is the "crisis," a stressful event serving to catalyze the actual episode of abuse. The crisis may be an emotional stress (death, divorce, illness) or something as simple as a broken television set. What may appear to the average person as a minor, easily managed problem may to the abusing parent be a devastating unmanageable disaster. Abusing parents do not have the self-confidence, ingenuity, and useful knowledge of how to seek help that are necessary to cope with crises. They express their rage and frustration through physical violence toward the child.

The Catalyst

Analysis of the interactional context of child abuse yields an equation: Special Parent + Special Child = Child Abuse, with the Crisis acting as a catalyst. The Special Parent may have been abused as a child and usually experienced distorted nurturing experiences. The Special Child could be unwanted or unexpected. The crisis is an emotional or situational stress, with the child an accessible target upon which to vent rage and frustration.

Figure 1 shows an overlap between child abuse (abnormal parenting) and normal parenting. There is a zone of transition separating acceptable and unacceptable parenting behavior. This zone in-

cludes emotional abuse or failure to provide an environment in which the child can thrive, learn, and develop. Diagnosis of emotional abuse is difficult because its effects are not as dramatic as bruises and lacerations. This zone of transition also includes cases of child abuse which go unrecognized because of the family's power, social prestige, or high socioeconomic status. Many people are reluctant to believe that such persons can be abusing parents and thus accept their parenting techniques as normal.

Figure 2 is a demographic wheel for child abuse, displaying the cultural, personality, and situational variable. The "fuzzy" outer realm of culture and social norms includes societal concepts of discipline, tolerance for violence, expectations from children, and value placed on children. It is helpful to use such a demographic wheel when designing a program of treatment because the various factors that must be dealt with are kept in the forefront. Unfortunately, professionals are sometimes tempted to believe that resolution of the "crisis" which catalyzed the episode of abuse will, in turn, completely resolve the problem of abuse. This is a very dangerous assumption. Resolution of a particular crisis may stop abuse for a time, but unless the family receives some form of therapy encompassing the wide range of variables shown in the demographic wheel, abuse will recur with each subsequent crisis.

Medical Treatment Necessary

Any community program for treatment of child abuse must provide medical treatment for the abused child, to include hospitalization, follow-up, and rehabilitation. Most children in whom the diagnosis of child abuse is suspected should be admitted to the hospital. The extent of injury is not the basis for admission; rather, hospital admission affords time for adequate evaluation of the child and his family. Follow-up and rehabilitation are vital because child abuse is harmful beyond the immediate physical effects.

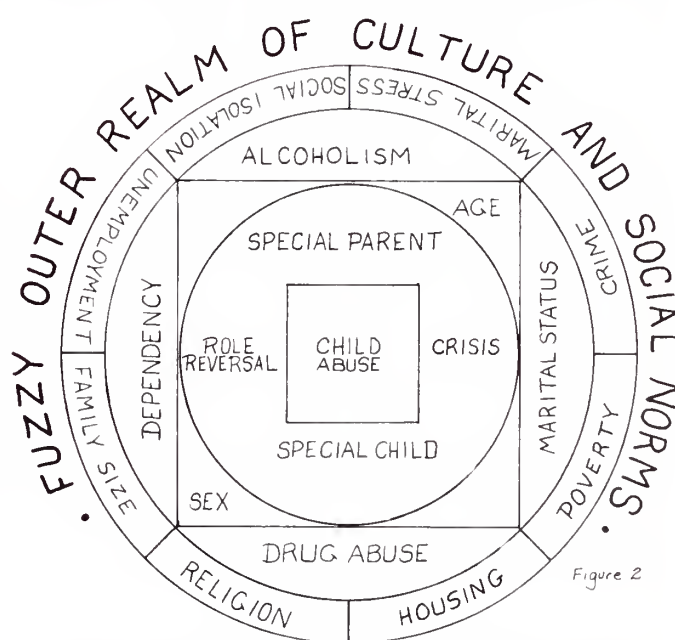
Without appropriate intervention, the abused child can be handicapped with emotional problems, speech problems, and mental retardation. Permanent damage to the brain is a frequent sequela of physical abuse; it is important to remember that about 50% of these brain damaged children will have normal intelligence. There is a close relationship between head trauma and mental retardation; however, there is evidence that environmental deprivation can result in retardation, with undernutrition an important factor. Subsequent normal growth and development of abused

children is dependent in large part upon whether or not they receive effective therapy.

Child abuse demands that the overall responsibility for the child's welfare and subsequent growth and development be shared. A physician or any other professional should not attempt to manage the problem alone.

Because the problem of child abuse is multi-dimensional in etiology, its management should be carried out by a multidisciplinary team. The basic team should be composed of a social worker, a nurse, a pediatrician, and a psychiatrist. The team works together to diagnose, treat, follow-up, and rehabilitate the abused child. The pediatrician admits the child to the hospital, conducts a general medical history and physical examination, and provides necessary treatment for injuries. There is an interview and assessment of the family, including a home visit, done by the social worker. There is also a nursing evaluation of the child's development and the parent-child relationship performed by the team nurse. A psychiatric consultation is included in the initial evaluation of the child. The team provides an honest explanation of the legal responsibility to report the case to the welfare department and explains the resulting investigatory and court proceedings.

During all these functions, "Who did it?" is not the issue. The parents should not be accused of evil or assigned guilt. It is important to create a non-threatening, understanding atmosphere for greatest success in therapy. The team arranges follow-up care, including primary medical care,



DEMOGRAPHIC WHEEL FOR CHILD ABUSE

Child Abuse

social service follow-up, and nursing follow-up. The child should return for regular health assessments without emphasis being placed on a "watch dog" role. The multidisciplinary team also initiates rehabilitative efforts for the child and family by mobilizing hospital and community resources available for the family. Parents should receive continued support through an effective modality of care. Ninety percent of parents can be helped to re-establish an effective, functional nurturing role.

Management Problems

Before instituting a comprehensive program for the management of child abuse, the community must be made aware of certain problems often encountered in the course of management. First, identification of child abuse may be hampered by the fact that people have a fear of testifying in court. This is true even of professionals like physicians and nurses. Efforts must be made to make the court proceedings less threatening to professionals and laymen.

Second, many professionals are not adequately trained in the areas relating to child abuse and neglect. Some provision for continuing education or refresher courses must be made.

Third, nurses, social workers, and physicians are not accustomed to working with each other as peers. Physicians are accustomed to being the "boss," the decision-maker who tells others what to do. The multidisciplinary team should function as peers, and a period of adjustment to new roles will be necessary.

Fourth, not everyone will be a good communicator. Abusing parents often have difficulty in communicating with people, and special skills in communication are required of those who work in the field of child abuse. Some training in the art of communication will be necessary.

Fifth, the drain on time, finances, and emotions for the physician in private practice is truly extensive. Parents and children often require 8 to 10 hours of intensive care during the crisis and many hours of additional therapy. Also, there is not adequate third party re-imbursement for a child abuse case. There is a set fee regardless of the amount of time spent.

Finally, there is a lot of pressure on the physician to make the right decision to protect the child, and this is an emotional drain. It might be more reasonable to pay a full-time, hospital-based physician to handle all child abuse cases for the community rather than to expect private physicians to devote time to the program.

Sixth, there is very little personal reward for any person working in the field of child abuse. Parents do not show up on time for appointments; they don't pay bills; they don't smile and say "Thank you." If things go wrong, the worker must fear that the parents may beat their child again. None of these problems are insurmountable. With recognition of these possible pitfalls and careful planning, a successful program can be designed.

Symptom of Crisis

Programs developed for the management of child abuse ideally would possess the following attributes. First, child abuse should be viewed as a symptom of family crisis with professional services oriented toward making families stronger. Attention must be paid to developing public policies which strengthen family life.

Second, there should be attention to the community context: the values of the community, its techniques of problem solving, its traditions of child rearing, and its available resources. There should be citizen supervision through community-based councils for children.

Third, program services should include social work counseling; medical consultation and treatment, including psychiatry; legal services; temporary foster home care; round-the-clock emergency services; and education.

Fourth, regular evaluation of the effectiveness of intervention is a crucial part of any program. No child should be returned to his home unless there is good evidence that he is being returned to a *rehabilitated* home. Finally, all people should be eligible for services. This should not be a program just for indigent families. Abusing parents come from all socioeconomic groups, and financial means should not be a test for eligibility.

Three Approaches

Programs for the management of child abuse may use three approaches to integrate the goals of abusing parents with the objectives of the treatment program. These three goal integration models were devised by Jon H. Barrett in his paper, "Individual Goals and Organizational Objectives: A Study of Integration Mechanisms." The first goal integration model, the Exchange Model, is common to nearly all programs for the management of child abuse. In the Exchange Model, a fairly explicit bargaining relationship prevails between the organization and the individual. The organization contributes to an individual's pursuit of personal goals on the condition and to the extent that he contributes to the achievement of the organization's objectives. This exchange in a child abuse program usually involves the parent co-

operating and participating in the treatment program *in exchange for* the program's help in retaining custody of the child. It is usually understood that unless the parent cooperates in the treatment process, the child will be permanently removed from the home. This can be a powerful incentive for abusing parents. Many of these parents have intense longings for children for reasons described previously and are willing to work with professionals to understand the causes of their abusive behavior.

The second goal integration model, the Socialization Model, is basically a social influence model. Influence processes in the program encourage the individual to value activities which help to achieve organizational objectives, or to disvalue activities which do not help achieve objectives.

One aspect of this model is leader socialization, a mechanism in which a formal leader, by example and speech, clearly indicates what the program objectives are, stresses their importance, and calls for them to be pursued with diligence. It is assumed that his followers will come to value the objectives and will adopt them as personal goals. One example of this mechanism is a program established in 1973 at New York Foundling Hospital. The program consists of a resident inpatient portion accommodating 8 mothers and 8-10 children and an outpatient program with the same services as inpatient except that the parents live in their own homes and report to the center for services.

After psychological testing, the mother is observed in her daily interactions with the child and an individual treatment plan is formulated. Each mother is assigned a social worker who serves as friend, companion, and advocate. The social worker is the link to the community and aids in securing housing, a job or job training, education, or day care for the child. The "group mother," a paraprofessional, assists the mother in developing homemaker skills and develops a daily routine around housekeeping, shopping, and cooking. The "group mother" teaches the abusing parent how to discipline and train her child through appropriate mothering techniques. There is structured play therapy to stimulate the child's visual, tactile, and auditory senses and to encourage the mother to relate more positively towards her child.

These sessions help identify particular behaviors that trigger the mother's negative responses. Program emphasis is on role-modeling techniques. Following completion of the program, the mothers return to the community where they are followed for up to 1 year in "after-care." "After-care" involves a weekly visit by a nurse, weekly group therapy, and a social service visit twice a week.

Peer Socialization

The second aspect of the Socialization Model is peer socialization, a mechanism in which peers relate to each other, stating what the program objectives are, stressing their importance, and helping each other to fulfill these objectives. Examples of this are Parents Anonymous or Families Anonymous, self-help groups organized on a voluntary basis by abusive parents themselves, with sponsorship and guidance from a professional worker.

The third goal integration model is the Accommodation Model. In this model, individual goals are taken into account in determining program objectives. The program is structured in such a way that the pursuit of program objectives will be intrinsically rewarding and will provide for the simultaneous gratification of individual needs and motives. Kempe et al were the first to recognize that a therapeutic program must include an attempt to provide "mothering" to the deprived adults who were abusing their children. Efforts must be made to provide "parenting" for the abused parent, to help assuage the emptiness many of these parents feel inside. The program should also accommodate to individual needs for education, better housing, or other services for which the parent feels he has a need.

Summary

In summary, any program for the prevention and treatment of child abuse is designed to change behavior and attitudes of abusing parents. The primary goal is to provide services to the parents and to prevent separation of parent and child through rehabilitative efforts. The secondary goal is to effect a separation where necessary, either on a temporary or permanent basis. Effective programs to facilitate change utilize some of the principles examined by National Training Laboratories in their study of elements that facilitate change. "Persons tend to change more readily when they have the competencies, knowledge, or skills required by the change. Persons tend to change more readily in an environment free from threat and judgement. Persons tend to maintain change as the change is supported by their environment. Persons tend to maintain change if there is a public commitment to the change." □

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A Complete Listing Of References Is Available Upon Request.



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The Management Of Intractable Diarrhea Of Infancy

With Peripheral Nutrition Utilizing A Commercial Fat Emulsion

William L. Buntain, M.D.†

Arnold G. Coran, M.D.‡

ABSTRACT

Intractable diarrhea of infancy remains a major clinical problem. Treatment has varied. Viewed here as an organ system failure management has two goals to place the bowel at rest, to allow healing and provide nutritional requirements as physiologically as possible. This report describes 5 infants with intractable diarrhea treated by bowel rest and total peripheral intravenous nutrition utilizing 10% Intralipid. Various other treatment regimens are discussed, comparing the associated physiologic attributes and complications. Total peripheral intravenous nutrition utilizing a fat emulsion is believed superior to other regimens in meeting the listed goals of management.

Diarrhea and malabsorption are important gastrointestinal disorders of infancy.¹ "Intractable diarrhea of infancy" is diagnosed when the diarrhea has been present for more than two weeks, in an infant less than three months of age; in whom more than three stool cultures have been negative

for pathogens, and the symptoms have been refractory to conventional treatment.² A number of mechanisms are believed responsible, but the data supporting these theories is deficient. Treatment has varied from formula changes and antibiotics and rehydration to elemental diets, total central or peripheral intravenous nutrition, and recently to cholestyramine. This report describes 5 infants with intractable diarrhea treated by bowel rest and total peripheral intravenous nutrition using 10% Intralipid.*

Materials and Methods

Five infants (Table I), three females and two males, ranging in age from six to 12 weeks, were diagnosed as having intractable diarrhea by the above criteria, at the Los Angeles County — University of Southern California Medical Center during the 18 month period from May 1972 through October 1973. Following attempts to manage the diarrhea with conventional therapy, all infants were placed on a peripheral intravenous infusion protocol^{3,4} using the fat emulsion Intralipid and dextrose as the nonprotein calorie sources and Amigen** as the protein source (Table II), by a technique previously described^{3,4}. (Present therapy protocols would utilize the crystalline amino acid solution Freamine instead of the protein hydrolysate Amigen.)

All infants were managed in intensive care units and followed closely both clinically and biochemically, with daily weights, accurate daily intake and output, and weekly determination of serum electrolytes, glucose, blood counts, and liver function studies. An informed consent was signed by all parents prior to the initiation of Intralipid therapy.

†William L. Buntain, M.D.: Former Resident Supervisor in Pediatric Surgery, Instructor in Surgery, Los Angeles County-University of Southern California Medical Center, Los Angeles, California. Presently, Chief of Surgery, The Children's Hospital, Associate Professor of Surgery and Director of the Division of Pediatric Surgery, University of Alabama School of Medicine, Birmingham, Alabama.

‡Arnold G. Coran, M.D.: Former Head of Pediatric Surgery and Associate Professor of Surgery, Los Angeles County-University of Southern California Medical Center, Los Angeles, California. Presently Professor and Head of section of Pediatric Surgery, Department of Surgery, University of Michigan Medical Center, Ann Arbor, Michigan.

Address reprints to: William L. Buntain, M.D., Department of Surgery, The Children's Hospital, 1601 6th Avenue South, Birmingham, Alabama 35233.

*Manufactured by Vitrum Co., Stockholm, Sweden, and supplied by Cutter laboratories, Berkeley, California.

**Manufactured by McGraw Laboratories, Irvine, California.

TABLE I — Infants With Chronic Intractable Diarrhea Treated With Total Peripheral Intravenous Nutrition Using 10% Intralipid

Age	Sex	No. of Days I.V. Nutrition	Birth Weight (Grams)	Initial Weight (Pre-Treatment) (Grams)	Final Weight (Grams)	Complications
6 weeks	F	16	3060	2610	2910	None
8 weeks	M	52	2400	2865	3840	None
9 weeks	F	21	?	2940	3210	None
12 weeks	M	28	2310	2640	3510	None
12 weeks	F	9	2640	2760	3210	None

Results

Peripheral intravenous nutrition (P.I.N.) was required for the entire group for a total of 126 hospital days, with an average of 25.2 days/infant (range nine to 52 days). (Table I)

Of the four infants whose birth weights were known, three had pre-therapy weights greater than their birth weights. All five infants showed progressive weight gain during intravenous nutrition with an average total increase of 573 grams (range 270 to 975 grams). The average daily weight gain was 22.7 grams.

Weight gain was progressive, with an initial "stabilization phase" of approximately six days, a "recovery phase" of another eight days, and a final "recuperative phase" thereafter. After the period of "stabilization," the increase in weight was

constant, and the infants could progressively be weaned off the P.I.N. and onto an oral formula early in the phase of "recuperation."

All diarrhea stopped within two days of the initiation of the P.I.N. protocol *and* bowel rest, with nothing by mouth.

Metabolic balance studies were not done. Serum potassium levels were consistently elevated but returned to normal following cessation of therapy. All other serum electrolytes and biochemical studies remained normal.

There were no complications of therapy and no deaths.

Discussion

"Intestinal failure," as coined by Phillips⁵, is an attractive and descriptive method of viewing infantile "intractable diarrhea." When integrated intestinal function fails, regardless of cause, fecal excretion is inconvenient, bulky, and liquid. It is both logical and reasonable to relate diarrhea to organ system failure. In chronic diarrhea^{6,7} the initial insult destroys the intestinal mucosa and its ability to produce enzymes necessary for the proper absorption of nutrients. Even after the inciting cause has been eliminated, placement of food into the lumen of the bowel causes further intestinal irritation, diarrhea, and malabsorption, resulting in inadequate absorption of calories and protein necessary for intestinal mucosal regeneration, and in exacerbation of the already existing pathology.

To maintain adequate nutrition in infants with chronic intractable diarrhea is one of the most frustrating problems facing the physician.⁸ Prompt attention to nutritional requirements is necessary, as the sick infant has a much smaller fuel reserve and delay in nutritional therapy rapidly depletes

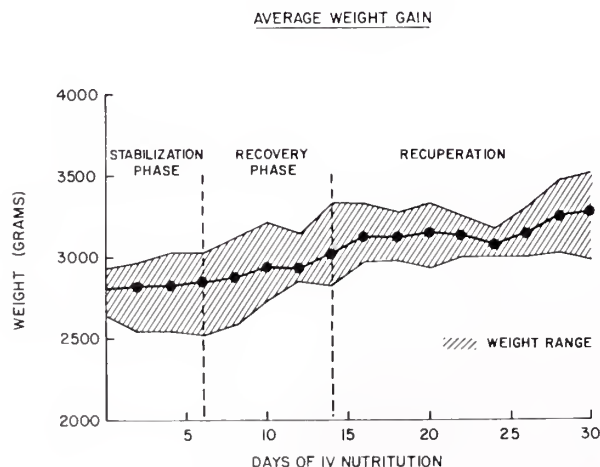


FIGURE 1 — Average weight gain shown as progressive, 22.7 gram per day. There was an initial "stabilization phase" of six days, a "recovery phase" of another eight days, and a final "recuperative phase" thereafter, during which weight gain was consistent and weaning could occur.

these reserves even further, leading to slower healing.⁹ Nutritional failure and secondary infection are the most common cause of death in this entity¹⁰ and prior to intravenous alimentation the mortality rate had been reported as high as 75%.¹¹

If we adopt the concept of "intestinal failure" as the end result of events producing infantile intractable diarrhea, management has two goals:

1. To place the bowel at rest to allow healing in the form of mucosal regeneration and to allow a return to normal of the enzyme activities integrating intestinal function.

2. To supply, as physiologically as possible, nutritional requirements adequate to maintain metabolic equilibrium with regard to growth and development, while intestinal healing occurs.

When intestinal failure is complete, total parenteral nutrition (T.P.N.) offers the only available support while the results of more definitive therapy are awaited^{8,12,13}. The basic indication for T.P.N. is the inability to obtain adequate nutrition via the gastrointestinal tract⁶. Where aggressively applied to infants with intractable diarrhea, the results with T.P.N. are uniformly excellent¹⁴⁻²¹. However, reports of the complications of this form of therapy¹⁴⁻²⁵ have raised serious questions as to its safety. The fact that infection may play a role in the etiology of intractable diarrhea may in itself explain the high rate of complications with intravenous nutritional therapy.

Peripheral intravenous nutrition with carbohydrate^{11,26} as the sole nonprotein caloric source, in large volumes, has been successful in eliminating the need for a central venous catheter. Large volumes are required for many weeks and weight gains of 18 grams/day have been reported¹¹. Central catheters were used only when peripheral veins were no longer available.

Another approach to obviate the potentially serious and life-threatening complications of central venous catheters is the use of elemental diets^{9,27,28,29}. Growth, development, and a positive nitrogen balance over long periods without serious side effects have been demonstrated with elemental diets. Being rapidly absorbed in the upper gastrointestinal tract, they stimulate less pancreatic and biliary secretions than standard formulas require minimal digestion, and are easy to administer; they are available in varied concentrations and osmolalities. Vivonex^{***} is the elemental diet used most frequently and consists of basic amino acids and monosaccharides. It is pre-

TABLE II — Protocol For The Total Intravenous Feeding Of Infants

Constituent	Volume (ml/kg Body wt. 24 Hr)	Amount (g/kg Body wt. 24 Hr.)	Calories
10% Intralipid	40	4	44
5% Amigen* in 5% Glucose	80	4 (protein)	32
10% Glucose	30	3	12
Total Volume	150		
Total Calories			88

Electrolyte & Vitamin Contents/Liter

Sodium	43.0
Potassium	46.0
Calcium	10.5
Magnesium	6.0
Chloride	67.0
Phosphate	29.0
Multivitamin Infusion**	1.7 ml.
Folic Acid	1.5 mg.
Aquamephyton	1.0 mg.
Vitamin B ¹²	10.0 g.

*Manufactured by McGaw Laboratories, Glendale, California. (The crystalline amino acid solution Freamine can be used instead of the protein hydrolysate Amigen). ** U.S. Vitamin and Pharmaceutical Corp., New York, N.Y.

packaged as an 80 gram packet of soluble powder containing 300 calories, 80% of which are derived from carbohydrate and only 0.4% from fat. L-amino acids serve as the nitrogen source. Slow constant feeding is the best method of administration. The concentration of the Vivonex mixture is very important in infants, for osmotic dehydration and diarrhea are not uncommon complications. This can be prevented if an isotonic concentration is started and the osmolality is slowly increased over several days. The time needed for adaptation seems to depend on the amount of functional intestinal absorptive surface remaining.²⁹

Sherman et al²⁸ treated 24 infants with intractable diarrhea with Vivonex, initially using a 13% solution supplying 15 calories/ounce, advancing to an 18% solution with 20 calories/ounce after three days, and then increasing to a volume which supplied 110 calories/kg/day and 2.25 grams protein/kg/day. At the conclusion of treatment, the infants were gradually switched to another basic formula. All 24 infants did well with a mean weight gain of 28+17 grams/day following 24+16 treatment days. However, if we accept the concept of intestinal failure with regard to severe intractable diarrhea, it seems unphysiologic and unwise to continuously challenge an organ system with abnormal mucosal function and enzyme activity, with large volumes of a hyperosmolar solution. Further, a normally physiologic diet (mother's milk) contains four to six grams of fat per

***Manufactured by Eaton Laboratories, Norwich, New York.

kilogram^{12,30,31} as a form of energy, while the commonly used T.P.N. and P.I.N. solutions are essentially fat-free and less than 1% of the calories in the elemental diets are derived from fat.

Infants on long term T.P.N. are commonly given plasma and/or blood infusions once or twice a week while on this therapy, theoretically to supply essential fatty acids and trace minerals.¹⁰ However, there is evidence to indicate that these infusions have no effect on fatty acid levels^{6,32}. It was formerly believed that the absence of fat produces no apparent problems in the majority of patients maintained on intravenous feeding for two to three months⁶; after that period, signs of essential fatty acid deficiency in the form of severe skin rashes develop. However, changes in plasma lipids and fatty acid levels characteristic of essential fatty acid deficiency have been shown to occur early, usually within the first week of intravenous alimentation.^{32,33}

That essential fatty acids are needed by infants cannot be disputed. Plasma fatty acid patterns characteristic of essential fatty acid deficiency can be converted to normal in infants with the administration of small amounts of essential fatty acids, intravenously, orally, or cutaneously^{32,33,34}. It is preferable and more physiologic to provide essential fatty acids initially in nutritional solutions in order to avoid these deficiencies. Intralipid satisfies this requirement, since 50% of it is composed of the essential fatty acid linoleic acid. When given peripherally with a protein and carbohydrate supplement, the hazards and complications of central venous lines are obviated, while simultaneously allowing near total rest of a failed organ system, with resultant intestinal mucosal healing and restoration of enzymatic and absorptive function.

The length of time the infusion is required is a function of the "healing time" of the bowel mucosa, approximately 25 days in this series. The weight gain in these patients is acceptable at 22.7 grams/infant/day, versus 28±17 grams/infant/day with the elemental diets²⁸, 30 to 45 grams/infant/day with T.P.N.^{6,8}, and 18 grams/infant/day with P.I.N. (without Intralipid)¹¹. Weight gains in infants with intractable diarrhea are probably slightly less than the normal, 10 to 15 grams/kg/day³⁵, because of the severe nutritional depletion present in these infants initially.

T.P.N. and P.I.N. accomplish the goals of therapy previously set forth in this report, but at a potentially considerable expense and complication rate. The elemental diets have a place in the management of infants with nutritional disorders, but their use is contraindicated in the intestinal

failure of intractable diarrhea. P.I.N. with Intralipid accomplishes these goals at considerably less risk, with equal or better success, and is more physiologic.

Cholestyramine, a nonabsorbable anion exchange resin with a strong affinity for bile acids has also been helpful in the management of diarrhea secondary to the cathartic effect of bile acids on the colon. It has recently been used to treat intractable nonspecific diarrhea of infancy^{36,37}. These authors treated 27 patients with intractable diarrhea using oral cholestyramine for periods of four to 25 days, and in all cases the diarrhea ceased within one to three days. Relapses responded to further oral cholestyramine therapy. There were no serious complications and there were no differences between those with positive and negative stool cultures.³⁶ The mechanism of action is not well understood, and similar results have not been duplicated¹¹; further investigation in this area is clearly warranted. Until its therapeutic benefits are clearly defined, we believe P.I.N. with Intralipid is the most physiologic approach to the management of the infant with chronic "intractable diarrhea."

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COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting on July 19, 1978:

- Confirmed the appointment of Mr. Clay H. Dean as Director of the State Health Planning and Development Agency and Mr. Oliver C. Kyle, as Acting Director of the Bureau of Health Development, effective June 27, 1978.
- Was advised of the conditional designation of the State Committee of Public Health as the State Health Planning and Development Agency, certified through June 30, 1979.
- Approved initial issuance of Assurance of Need for 15 facilities and extended the Assurance of Need for a Mobile Facility.
- Was advised of the approval of the Alabama State Board of Health as the Agency to carry out provisions of Section 1122 of the Social Security Act through June 30, 1979.
- Reviewed and commented on Health Systems Plans, Second Editions, with a number of specific recommendations to the Statewide Health Coordinating Council.
- Approved a recommendation from the Dental Representative urging participation of dentists in the preparation of HSA plans and coordination with emphasis on three principles of dental health planning emphasizing health education and prevention, and manpower considerations.
- Approved a motion emphasizing the *proper* utilization of nurses and nurse practitioners in health delivery systems.
- Approved a comment objecting to the establishment of hospital-based ambulatory and primary care units.
- Approved a recommendation that a state level be set for nursing home beds based on utilization instead of varying from one HSA to another.
- Approved a motion objecting to the standard of a 1,500 obstetrical deliveries per year minimum in community hospitals to justify the provision of maternity services.
- Approved a motion commenting that the scope of some HSPs were too broad and were considered to be outside the scope of health planning.
- Approved a motion that the SHCC be advised that HSPs should not specify a sponsor of a needed facility.
- Approved a recommendation from HSP No. 3 for a rewriting of the End-Stage Renal Disease Section to conform to the Alabama ESRD Plan and Federal Regulations.
- Approved a proposed amendment to the EMS Law for introduction in the forthcoming Legislative Sessions.
- Was advised of the decree from the U.S. District Court specifying the conditions for accessibility of vital records to the news media and affirming the assurance that the public and the press should have equal access to public information.
- Approved for distribution for purposes of a public hearing a draft of regulations governing subdivision sewerage systems and water supplies.
- Received information regarding the support of educators for the compulsory immunization requirement.
- Was advised regarding a decision to decrease aid for unborn children.
- Was advised of continuing efforts to secure capital construction funds for the completion of space in the Jefferson County Health Department for relocation of the branch laboratory. □

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AUXILIARY

"Does It Pay To Belong? If So, Why?"

Mrs. Aubrey E. Terry
President, A-MASA

It has seemed to me that often in the past we have become associated with organizations because it was expedient, expected of us, "the thing to do"; because we wished to enjoy the friendship of those we liked, admired; or wanted to unite our efforts toward making a success of something worthwhile.

As before, these are still valid reasons, but with more enthusiasm we can now add the words almost necessary as a cause for belonging, when speaking of the State Medical Association and its Auxiliary. We know our common interest centers around your profession and its concern with better health for everyone and are convinced that we can evidence this concern too by being an effective, identifiable group within our communities.

Membership is certainly a vital part of this organization. In Alabama we have 30 Auxiliaries, consisting of 33 of 67 counties for a total of 1,839 members. The Medical Association of the State of Alabama has 66 County Societies with a membership of 3,509. One of our major goals now is to close the number gap between those belonging to MASA and AMASA. At our state convention in Huntsville recognition was given to 10 counties who already have enlisted 100% of their eligible members. Included were Baldwin, Blount, Cherokee, Coffee, Dale, DeKalb, Franklin, Geneva, Houston, Pickens; and I hope that before April 1979 many others will follow this example.

It Pays To Belong

It pays to belong to MASA and AMASA. In this way we join forces with thousands of others over the country in the advancement of medicine and the betterment of the public health. The Auxiliary works closely

with MASA to help support sound legislation which affects the health and well-being of our people. We better serve by having a collective voice heard on public policies. Current issues are considered by members in formulating local program plans. Presently we are interested in the implementation of required comprehensive health education in Alabama schools, the national immunization awareness program, impaired physician program and others that meet specific community needs.

May I ask the support and help of each Society member to check with your spouse to see if they are members of the Auxiliary and, if not, please encourage them to join. If you live in one of the 34 unorganized counties, I will be pleased to assist you by discussing ways that will be helpful to you initially. Also there are many dedicated doctors' spouses in regions where county affiliation is not possible or practical. These people are active and vital in their communities and can serve the Auxiliary well as members-at-large. Membership-at-large may be obtained by completing the form at the end of this article.

May I remind you to exercise your privilege of becoming a part of this group that will appreciate your ideas and participation, and by so doing our goals can better be accomplished.

Names of the Auxiliary members will be included in the 1978 Roster of the Medical Association of the State of Alabama. We wish to thank the MASA Officers, Board of Censors and Staff for extending this courtesy to us.

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PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE: Age 52; St. Louis University, 1961; National Board Certified; seeking practice in multi-specialty group, single specialty group or industrial. Available October 1978. LW-11662.

GENERAL PRACTICE/FAMILY PRACTICE: Age 57; University of Kansas, 1950; Will be American Board Eligible in 1978 in Family Practice; seeking practice in administrative, institutionally based or public health. Available September 1978. LW-10786.

FAMILY PRACTICE: Age 31; Ramathibodi Hospital, Bangkok, 1973; American Board Eligible; seeking practice in solo, partnership or single specialty group. Available November 1978. LW-10796.

INTERNAL MEDICINE/PEDIATRICS: Age 36; Gandhi Medical College, 1963; American Board Certified; National Board Eligible; seeking practice in specialty in a medium sized town. Available October 1978. LW-07378.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03

INTERNAL MEDICINE: Age 32; Tulane, 1971; American Board Certified in 1974 in Internal Medicine; seeking practice in town of 25,000 to 50,000 population. Available at a negotiable time. LW-0500.

INTERNAL MEDICINE/PULMONARY DISEASES: Age 55; Southwestern Medical, 1948; American Board Certified in Internal Medicine; seeking practice in school health, institutionally based, or public health. Available April 1979. LW-11941.

MEDICAL STUDENT: Age 26; Universidad Central Del Este, Dominican Republic, 1982; seeking family practice in community willing to finance a medical student. LW-07178.

UROLOGY: Age 31, New York Medical College, 1974; seeking practice in a group, partnership or solo. Available July 1, 1979. LW-07278.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

ORTHOPEDIC SURGEON: Age 31; Med. College of Georgia 1972; seeking practice in town of 50,000 plus population. Available August 1979. LW-701

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PSYCHIATRY: Age 54; University of Cincinnati, 1951; American Board Eligible in Psychiatry; seeking general, specialty, or assistant or associate practice in town of 100,000 plus population preferably Montgomery. Available this summer. LW-0502. **SURGEON:** Age 35; Medical University of South Carolina, 1968; seeking practice in specialty in a town with a population of 50,000 - 200,000. Available in the fall of 1978. LW-0503.

SURGEON, GENERAL/FAMILY PRACTICE: Age 32; Univ. of Mississippi 1973; will be American Board eligible in 1978 in General Surgery; seeking single specialty or

multi-specialty group or partnership. Available October 1978. LW-08593

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400

UROLOGY: Age 30; Yale Univ. 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800

PHYSICIANS WANTED (Opportunities for Practice)

FAMILY PRACTICE, OBSTETRICS & GYNECOLOGY, ORTHOPEDIC SURGERY, AND PEDIATRICS: Opportunity in progressive community seeking to expand its Medical Community. Southeast Alabama town with population of 14,000 within 50,000 population trade area located on 45,000 acre lake. Resort-oriented town within minutes of the beach and larger cities contains a progressive 74 bed hospital. Ample opportunity for full professional and personal life. Excellent school systems, churches; and unlimited recreational facilities with fishing, boating, hunting unexcelled. PW-17.

FAMILY PHYSICIAN—Opportunity to associate with an established physician in a new well equipped office, having x-ray, EKG, and a medical technologist, hospital privileges, no investment, town of four thousand, located thirty-five miles south of Tuscaloosa, plenty of time off for abundance of local hunting, fishing, and boating or continuing medical education. PW-13.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

GENERAL PRACTITIONER—Opportunity in central Alabama town of 30,000 population. Located 30 miles east of Montgomery, Alabama, and 28 miles west of Auburn University. Adjacent to Lake Martin. A new 77-bed hospital with a new Medical Arts Complex adjoining with office space available. Guaranteed income for a General Practitioner or Family Physician. PW-4.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITY in northeast Alabama community of 1,200 population, trade area of 6,000-17,000 population; nearest large cities of 13-20 miles. Physician in the town died recently. Office space and housing readily available. Government work and industry. School and several churches. Recreational and social activities. PW-6.

OPPORTUNITY for general practitioner in 20,000 population trade area, town of 7,000 population located in Southwest Alabama. City of Mobile located 65 miles away. 35-bed hospital in the town. Manufacturing plants—textile, chemical and forest products. Recreational facilities. PW-8.

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

PHYSICIAN WANTED to take over busy practice in General Medicine in convenient location of Tuscaloosa. PW-05178

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

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PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7545, evening hours 553-2198.

POSITIONS AVAILABLE

AVAILABLE: Good solo Ophthalmology practice in delightful Southeastern town of 50,000 with drawing area 300,000. Rapid growth area near beaches. Excellent opportunity. Very reasonable. Contact: Box C; P. O. Box 1900-C, Montgomery, Alabama 36104.

ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

FULL OR PART-TIME PHYSICIAN—Preferably internist to work in adjudicative medicine in the Division of Disability Determination, State of Alabama, in the Birmingham office. Work involves reviewing claims for Social Security Disability, teaching and consultations. Salary open. Work requires no patient contact and disabled physicians are invited to apply. Send curriculum vitae to: John A. Shelton, Director, State Department of Education, Division of Disability Determination, 2800 Eighth Avenue, South, Birmingham, AL 35233.

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Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment.

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose[®] packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose[®] packages of 100. Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

JOURNAL

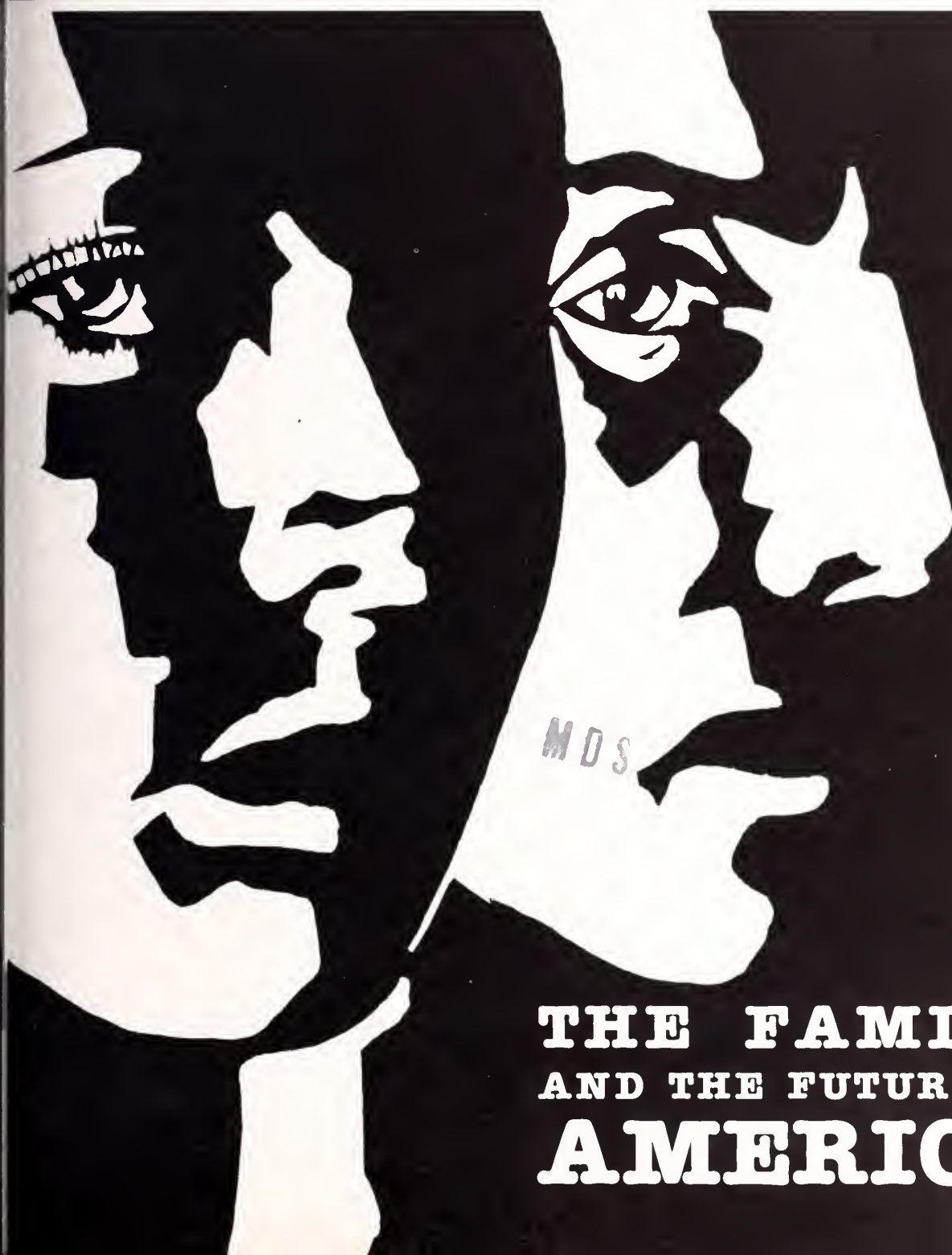
of the Medical Association of the State of Alabama

DEPARTMENT OF THE
COLLEGE OF PHYSICIANS
OF ALABAMA

SEPTEMBER 1978


OCT 25 1978

vol. 48 #3



MDS

**THE FAMILY
AND THE FUTURE OF
AMERICA**



Anxiety...
Often a significant feature
of irritable bowel syndrome*

The action of
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(chlordiazepoxide HCl)

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of adjunctive

Librax®

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2.5 mg clidinium Br.

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Librax is unique among GI medications in providing the specific antianxiety action of Librium® (chlordiazepoxide HCl) as well as the potent antisecretory and antispasmodic actions of Quarzan® (clidinium Br) for adjunctive therapy of irritable bowel syndrome* and duodenal ulcer.

*Librax has been evaluated as possibly effective for this indication.
Please see brief summary of prescribing information on following page.

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Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma, prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment, blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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Roche Products Inc.
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ABOUT THE COVER

The cover abstraction by Journal Production & Design Chief Phyllis Smith interprets the disintegration of the American family, and the members within it, as described in the unsettling article by Menninger Psychiatrist Harold M. Voth, M.D., on page 16. Dr. Voth is unsparing in his argument that the family, as the one indispensable unit of any society, is now in a state of rapid decline and fall in this country, once famous for the vitality of its national character.



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Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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Reprints: Reprint orders should be returned at once. Prices for reprints, based on number of pages, will be furnished upon request. Communications should be addressed to *The Journal of The Medical Association of The State of Alabama*, P.O. Box 1900-C, Montgomery, Alabama 36104. Telephone 263-6441, Area Code 205. ●

FROM THE EXECUTIVE DIRECTOR

Probably the least necessary message I could write Alabama physicians at this time is the need for the unity that comes with organization.

Never before in history have American physicians been so completely surrounded by menacing forces as they are now. I need scarcely itemize those menaces for you. The list might begin with malpractice or even national health insurance but ending it would not be a job I would want to undertake.

These external pressures, singly or collectively, are reason enough why American physicians should be drawing their wagons into a circle.

Fortunately, the circle already existed, and has since 1847, when the American Medical Association was born. As it happened, The Medical Association of The State of Alabama came into being that same year and affiliation was as logical as it was inevitable.

It's called a federation, which is precisely what it is — a linking together of individual doctors, from the county society level through the state level, into a national assembly of physicians who determine, through local representation, what AMA policy shall be.

That policy, once democratically arrived at through actions of the Congress-like House of Delegates, is expressed in many ways, including lobbying the real Congress in Washington for and against legislation.

When you belong to The Medical Association of The State of Alabama and, through it, the American Medical Association, your opinion, your influence, is multiplied many times by a group voice that speaks for all physicians in the nation.

Give me a fulcrum, we remember from school days some worthy ancient as having said, and I will move the world. And that really is what the strength of numbers is about — leverage.

Or clout, which is what we are talking about. Your clout is amplified by the group. If you doubt that, ask any politician. If he is honest with you he will tell you that, as an individual, you just don't have much influence.

Politicians think numerically. It is doubtful that a single small voice ever changed the mind of a member of the Legislature or of Congress.

And it's not just political persuasion. Public opinion, which itself forms political opinion, is shaped and molded more by collective voices than by individual ones.

That may not be the most inviting thought, but it appears to be true. We would all like to think that we, as individuals, are all-important and that what we think counts far more than any group to which we might belong.

In an ideal world, that might be true. But the ideal world, as you are forcibly reminded daily, is some years in the future.

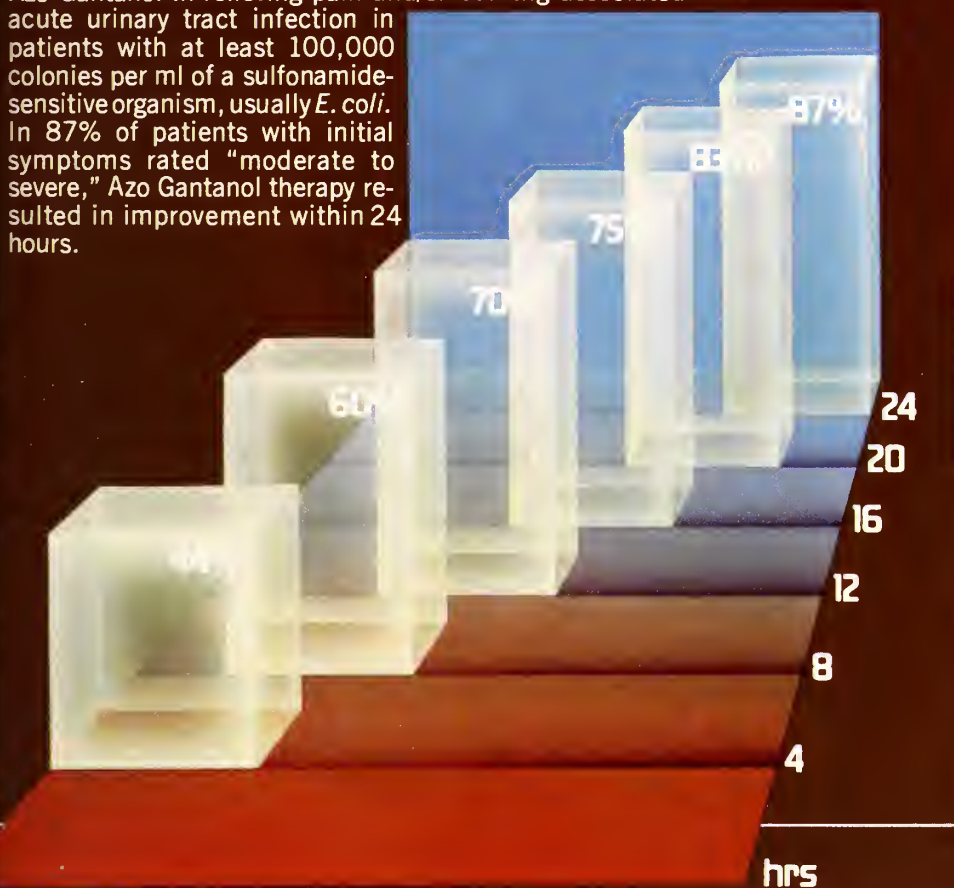
In the meantime, we must make do with the one we have, in which the chorus is many stronger than all the individual voices that make it up.

S. Lon Conner

Important data on the pain of acute cystitis:

In 87% of patients studied (303 of 349), Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

for
the pathogens

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complete product information, a summary of which follows:
Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

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PRESIDENT'S MESSAGE

Art Of The Possible

Hiliary H. Henderson, Jr., M.D.
President



The Department of Health, Education & Welfare recently launched a publicity campaign to educate patients all over the country to their rights to a second opinion in elective surgery.

Second opinion rights are, of course, old stuff to today's practicing physicians and to those who preceded them. It is an ancient prerogative, and one that has always been freely offered.

However, some physicians think that when an agency of government took it upon itself to broadcast this right, it became somehow suspicious. These physicians advocate stonewalling it—refusing to cooperate at all with anything the government sets out to do.

This viewpoint was given every consideration in the regular August meeting of the Board of Censors. However, the Board adopted a view that, I think, better reflects the idea that politics is the art of the possible. This, to me, means that in our dealings with a strong central government we must at all times remain flexible and adaptive.

The Board decided in August on an implementation plan that would ban any closed-panel of hand-picked physicians eligible for second opinion. The Board's plan would make all actively practicing physicians not otherwise disqualified eligible for the list of second opinion doctors in the state.

That list would be held by Alabama Medical Review, the state's PSRO. A patient would be assured of the option, should he choose to exercise that option, of selecting his own physician for a second opinion.

A patient who wants names of physicians available for second opinions can get them from AMR's hot line.

Everything is voluntary, unlike the second opinion program being attempted by at least one private insurance company. That would penalize a patient for not seeking a second opinion and would provide the insurance company's own list of second opinion panelists. I think both of these approaches are clearly wrong.

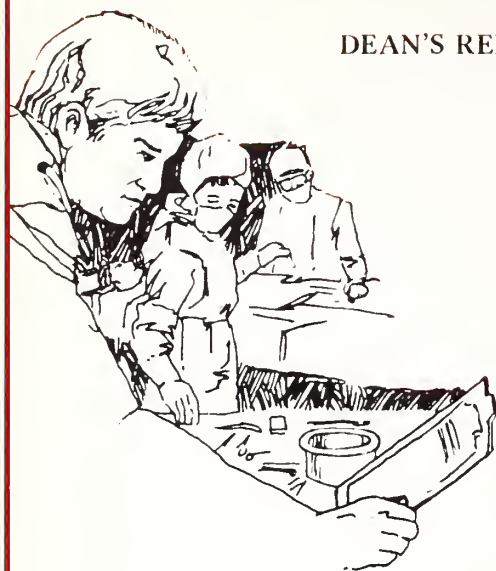
Not many patients now ask for second opinions. And not a great many more will ask for them now that HEW has gotten in the act. But those who do will be given every assistance in getting that opinion.

I find nothing wrong with this as it has been our policy. But even if there was something evil about it, HEW was going ahead with a second opinion program anyway, with or without MASA's help.

That being so, I think it is much better than MASA should remain in a position to describe the conditions under which the program will be carried out. And that is what the Board did in August. Actually it did no more than apply the thoughtful position of the AMA's House of Delegates, which was reaffirmed in June in St. Louis. That position says:

"Recognizing that the advisability of surgery or other specific therapy can be a matter of opinion, the House of Delegates of the American Medical Association (1) reaffirms the right of a patient or a physician to seek consultation freely with any consultant of his/her choice; (2) opposes the concept of mandatory consultation when required by a third party payor; (3) supports the concept that when consultation is required by a third party payor, the consultation should be at no cost to the patient; (4) opposes the concept of closed panels of consultants; and (5) supports the concept that if consultation is required by a third party payor, the patient should be allowed to choose a physician of his/her choice."

Hiliary H. Henderson Jr.



A Case Study In Hospital Utilization

By

William R. Willard, M.D., Dean
College of Community
Health Sciences
The University of Alabama

The Bibb County Hospital

Community service, i.e., efforts to help communities which need more and better health services to obtain them, is one of the major objectives of the College of Community Health Sciences.

Although the physicians who practice locally and those who might be recruited to a community are usually the key to solving the problems of adequate health care, there are many other factors involved, including the hospital facilities and their use.

If communities are to be helped in a significant way, the activities of the College of Community Health Sciences must be much broader than efforts limited to training the best family physicians possible and to providing excellent community-oriented clinical education for medical students.

Some months ago, the College of Community Health Sciences was approached by the Administrator, the Board Chairman of the Bibb County Hospital and the leading physicians in Centreville to see if the College could help the Bibb County Hospital analyze and solve its chronic problems of low census and deficit financial operations.

The Bibb County Hospital has 35 acute beds, opened in 1951, and a 103-bed nursing home with two subsequent additions. The hospital, owned by the county, has had excellent support from county officials for its operation. A good board of leading citizens, assisted by the medical staff, has been given freedom to operate the hospital as efficiently as possible.

Bad Times Come

In 1970, the hospital began to experience a low census with its associated financial problems. For a time, the "profits" from the nursing home helped to carry the hospital financially. Some federal revenue-shar-

ing money also helped. Local banks made loans at low or no interest. In 1975, the citizens of Bibb County voted a 1% sales tax with 90% of the income from the tax going to the hospital. In spite of this community support the low census continued and with ever escalating costs, the financial problems of the hospital have continued.

The Bibb County Hospital is located in Centreville about 30 miles east and a little south of Tuscaloosa; it is about the same distance from Bessemer, the other nearest urban center. The population of Brent-Centreville was estimated in 1977 at 4,457 compared with the 1970 census of 4,326. The population of Bibb County was estimated in 1977 at 13,400 compared with 13,812 in 1970.

The county is dependent largely on agriculture, lumber and coal mining for its economy. The 1974 average per capita income was reported to be \$2,795 compared with \$3,624 for Alabama as a whole. Based upon the sample of households interviewed, described later, the average household income can be tabulated as follows:

Less than \$3,000	15%
\$3,000-\$6,000	38%
\$6,001-\$8,000	29%
Over \$8,000	18%

The percentage of people, according to the survey, who are 65 years or more of age was a little greater than in the 1970 census (14.5% compared to 11.5%). Those under 18 years of age were less than in the 1970 census (32.9% compared to 37.5%). These figures plus a slight decline in population are indicative of a population which is aging somewhat and not growing, a characteristic of a number of rural counties in the State.

Physician Shortage

Any physician knows that physicians using the hospital determine the hospital census. The number of physicians in Bibb County, always small since 1970, has fluctuated. There has been only one active stable physician. A second physician practiced there also until 1975. A young general practitioner with one year of hospital training practiced there for a year in 1974-75, then he left for another state.

A National Health Service Corp Internist came on Oct. 1, 1976 but will be leaving after completing his tour of service on Oct. 1, 1978. Two apparently well-accepted foreign medical graduate physicians, one a pediatrician and one a general practitioner/obstetrician, have begun practice in Centreville in January and February 1978, respectively.

Thus, at times there has been only one physician; some of the time, two; for a short and temporary period recently, four; and this will drop to three, with two being foreign medical graduates.

During the past four years the hospital census has varied somewhat, ranging from a high of 33.3% to a low of 23.3%. The average length of stay per patient has steadily dropped from 6.8 days in 1974 to 5.3 days in 1977. The source of patients over the three-year period (Oct. 1, 1974 through Sept. 30, 1977) is as follows:

Centreville	45%
Brent (immediately adjacent to Centreville)	30%
West Blocton (16 miles north of Centreville)	14%
Out of County	4%
Unknown	1%

Obviously, the hospital has served few patients who came from outside of Bibb County.

The local hospital officials and physicians wanted to know if there was anything they could do to increase the census of the hospital. They wanted help in "the compilation of data on utilization of the hospital" and "it would be beneficial to know how the community perceives the hospital, the administrator, the local physicians and our relationships to the population we serve." It was hoped that, with this information, some remedial steps could be taken to help

the hospital census and financial picture.

Questionnaire Distributed

The College of Community Health Sciences undertook the study, with Dr. Robert Gloor, Associate Professor of Community Medicine, as project director, with the help of Dr. James Leeper, Assistant Professor of Community Medicine. In consultation with appropriate administrative staff, board members and local physicians, a detailed questionnaire was developed, pretested and copied printed by the Centreville Press. A group of local citizens were recruited to administer the questionnaire. Their travel and a modest stipend was paid by the hospital. CCHS personnel provided a brief training period for the interviewers, supervised their work and analyzed the data obtained.

A major part of the study was the interview of a random sample of 250 households, consisting of 802 persons. This represents 6.3% of the total households in Bibb County and a 5.6% of the estimated population. The sample appeared reasonably typical of the Bibb County population. The household size averaged 3.2 persons, compared with 3.4 in the 1940 census. There were 19.3% blacks compared with 25.8% according to the 1970 census. As noted earlier, the percentage of those over 65 was greater than in 1970 and those under 18 years of age was less. These differences, although not large, are probably indicative of the changing population pattern during this decade rather than sampling error.

Brent-Centreville is the only community in Bibb County with physicians in residence. However, Centreville was the usual source of medical care of only 25% needing hospitalization and 35% requiring ambulatory care (office visits).

Reasons For Staying Away

The reasons given for not using Centreville as a source of medical care are interesting and can be tabulated as follows:

Patients' family physician located elsewhere—36%

Need for specialty care (not available in Centreville)—21%

Dislike for Centreville physicians—15%

Patients live closer to physicians located elsewhere (less travel)—10%

Dislike of the Bibb County Hospital—5%

Those with higher incomes tended to go elsewhere. The United Mine Workers were less likely to go to Centreville than the rest of the population. The United Mine Workers payment policy for medical and hospital care would not provide coverage for patients hospitalized in Centreville.

In 78 households (31.2% of the sample) someone was hospitalized during the previous year and only 14% of those hospitalized went to Bibb County Hospital. The reasons given for using other hospitals are as follows:

Patients' physician uses other hospitals—49%

Specialty care assumed needed (not available in Centreville)—16%

Patients live closer to another hospital—8%

Patients dislike Centreville physicians—5%

United Mine Workers benefits (not available for care in Centreville)—5%

Although the actual figures vary somewhat a roughly similar pattern prevailed for those obtaining office and emergency care during the previous year as for those obtaining hospital care.

How the public perceived the hospital may influence its utilization. From the figures given above, it is apparent that a relatively small percentage of people expressed a dislike for the hospital or the physicians. In fact, among those who used the hospital, 53% thought the care they received was excellent and 42% rated it good, i.e., 95% of the total.

This is a much better rating than was given by patients who went to other hospitals than Bibb County Hospital for the care they received elsewhere. However, one-fifth to one-third of those interviewed said they did not know enough about the Bibb County Hospital or the Centreville physicians to express an opinion about the services available or the quality care that is provided. For example, few of those persons knew that Bibb County Hospital can provide adequate care for the acute patient with stroke.

Nevertheless, almost everyone (95%) thought the County should continue to operate the hospital and nursing home and two-thirds of those

DEAN'S REPORT

interviewed said they would be more likely to use the hospital if there were more physicians in the county. There was a clear expression of need for more physicians.

Only the high points from the data collected have been presented but what conclusions, if any, can be drawn from this survey?

The first, which was self-evident even without a study, is that as more good physicians use the hospital the hospital census will be higher. Without question, Bibb County needs more physicians; it has been on the list of counties critically short of physicians for several years. There is also a history of a relatively short duration of stay of some of the physicians who have come to Centreville in recent years.

Thus, the physician population has not been stable. It would be ideal if among the physicians recruited in the future there were both family physicians and traditional specialists so that fewer patients would have to go elsewhere for specialty care.

A second conclusion is that more people from the county should be better informed about the hospital and the services that are available in Centreville. When up to one-third of the people in the county know little or nothing about the hospital and medical services available, they are more likely to go to other better known institutions and physicians.

There is an interesting sociological phenomenon in Bibb County. Those in the northern part of the county do not usually look to Centreville as their nearest major center but tend to be oriented toward Tuscaloosa, Bessemer or Birmingham. It would appear that some serious work with help from someone skilled in community organization might do much to unify the county and to motivate it to work cooperatively toward the solution of its medical care problems.

This would enable Bibb County to do a much more effective job in recruiting additional physicians and holding them. This would also do much to set the stage to permit planning for economic and other growth. A dynamic and growing area is more attractive to physicians as well as others than one which is not. □

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**THE FAMILY
AND THE FUTURE OF
AMERICA**

A distinguished Menninger Foundation psychiatrist and psychoanalyst sounds the alarm that traditional American values are deteriorating at such a rate, family structure is already undermined, sexual identity is rapidly eroding and that the nation is now where other declining civilizations were in their collapse. Distressed by the repudiation of marriage by millions of young couples, fatherless children, the "emasculatation" of the male, he sees ominous signs in the promotion of homosexuality, equal rights for women and the emergence of the radical feminist as the model for American women. Dr. Harold M. Voth's blistering commentary should provoke both passionate support and dissent. The speech was first given at the National Defense Luncheon in Washington, April 17, 1978, and a few days later before the Auxiliary to The Medical Association of The State of Alabama in Huntsville.

By HAROLD M. VOTH, M.D.*

This is a grave time in the history of our nation. Changes are taking place in our way of life and in our national character which have lowered, and will continue to lower, the vitality of our people, the quality of our institutions, and our basic values.

The inevitable result is that we will undergo a progressive disintegration and possibly the eventual collapse of our democracy. When sufficiently disintegrated, forces either within our borders of a revolutionary nature or external forces will overwhelm what is left of America. The American Dream will be over.

People tend to believe that America, the invincible, will always be, that generous and stalwart Americans will always exist, that our way of life is

forever safe. This is an illusion, a self-deception. An internal process is at work which poses a far greater danger to us than our dwindling natural resources, the energy crisis, our huge national debt, or the trade deficit.

While it is true that technological advances, abundance of natural resources—in short, environmental and sociological factors—have a great deal to do with how far a society advances, personal factors or forces within the individual, that is, the vitality of a people, really make the difference. Social values and traditions channel individual vitality in ways that cause a people to develop into a great society. In America we have had the resources, the technological developments, the way of life, *and the individual vitality* which made this the greatest nation of all time.

We are, however, all on a passing train. As we pass through this life, each individual supports certain values, traditions, and institutions and make numerous contributions to society. Then suddenly death comes and our influence ends. New individuals take our place. But what will these new Americans be like? What values and patterns of living will they support?

Will they advance our traditions to new and higher levels of excellence, or will they implement ways of life that lead to disintegration and decay?

In my opinion, there is no question about the direction America is taking — we are deteriorating at an alarming rate. I will now explain why I think this is happening, provide evidence for my inferences, make some projections into the future, and conclude by suggesting what must be done.

Individual vitality is not a mysterious phenomenon; we know where it comes from. A newborn child contains great potential, but in order for that potential to be unlocked, evoked, developed and expressed, certain fundamental events must take place early in its life. When these events occur imperfectly or do not occur at all, the developing child will become a social liability in one form or another rather than an asset, or if he becomes an asset he may never achieve his full potential.

I have worked as a psychiatrist for 30 years and as a psychoanalyst for nearly 20, and the evidence that I have seen, as have many of my colleagues, is overwhelming as regards what it takes to turn out healthy, mature men and women who can take hold of life, do something constructive with it, and

*Harold M. Voth, M.D., is a senior psychiatrist and psychoanalyst at The Menninger Foundation, Topeka, Kansas. He is a Rear Admiral in the U.S. Naval Reserve, and the author of hundreds of articles published in professional journals. His latest book is titled *The Castrated Family*.

THE FAMILY & THE FUTURE OF AMERICA

embrace values, traditions and institutions which advance the society.

The Essential Family

The crucible from which all life springs is the family. The events within the family can make or break the individual and, collectively, civilization. This fundamental unit is the building block and was the building block of all social organizations from the tribe, village, and on to the most highly developed societies and civilizations. Will Durant said the family can survive without the state, but without the family all is lost. Therefore, not only must the family survive, but its internal workings must function in ways that turn out strong men and women — not weak ones who eventually become casualties of one form or another or who may work actively against the best values and traditions of our country.

The underpinnings of personality are biologic underpinnings. None are more fundamental than the biologic imperatives which lead to the psychologic qualities of maleness and femaleness. There are, of course, an array of other potentialities. One of the most fundamental functions of parenting is to evoke, develop and reinforce gender identity and then proceed to shepherd the developing child in such a way as to bring his psychological side into harmony with his biological side, and thereby develop a solid sense of maleness or femaleness.

The quality of maleness or femaleness is intimately woven into the overall fabric of personality. Human beings are not biologically bisexual, despite what the gay liberationists would have us believe. The human spirit is greatly impaired when childhood development does not lead to fully developed masculinity or femininity. Fully masculine men and feminine women are by definition mature, and that term implies the ability to live out one's abilities. These include the capacity to mate, live in harmony with a member of the opposite sex, and carry out the responsibilities of parenthood.

Mature people are competent and masterful; not only can they make families but they can take hold of life generally and advance it, and in particular they can replace themselves with healthy children who become healthy men and women. Mature individuals can, of course, elect to not have children and deploy all of their energies into their work. The fate of mankind depends on the durability of the heterosexual relationship, and the stability and integrity of the family.

The Most Important Function

The correct development of a child requires the commitment of mature parents who understand either consciously or intuitively that children do not grow up like Topsy. Good mothering from birth on provides the psychological core upon which all subsequent development takes place. Mothering is probably the most important function on earth. This is a full-time, demanding task. It requires a high order of gentleness, commitment, steadiness, capacity to give, and many other qualities, too. A woman needs a good man by her side so she will not be distracted and depleted, thus making it possible for her to provide rich humanness to her babies and children. Her needs must be met by the man. Above all, she must be made secure. A good man brings out the best in a woman, who can then do her best for the children. Similarly, a good woman brings out the best in a man, who can then do his best for his wife and children. Children bring out the best in their parents. All together they make a family, a place where people of great strength are shaped, who in turn make strong societies. Our nation was built by such people.

When the personalities of parents are crippled by psychological conflicts, in particular those which impair a clear sense of maleness or femaleness, or when children are deprived of the continuous commitment of mothers and fathers (the mother in particular) during the first few years of life, developmental disturbances occur in

children of varying degrees of severity, depending on the time and duration of occurrence of parental absence or the degree of severity of the personality disturbances in the parents. The developmental disturbances in the children may show up in childhood, or they may go underground only to surface years later when life begins to make its demands on them, especially when they attempt to make families of their own.

Those pioneers who developed America possessed great inner strength. They came from strong families. There was no ambiguity about male or female. Their will prevailed because they had been given to generously by their mothers and fathers. Family ties were close and solid. America became the greatest, strongest and most generous nation of all time.

Industrialization slowly broke up the close and continuous nature of family life. Inexorably, fathers were seen less and less, mothers had to take over more of the husband's responsibilities and as a consequence they had less time and energy to discharge the mothering function. Cities grew, commuting distance increased, and families became uprooted. Then came wars — World War I, World War II, and Korea. Fathers were killed, millions were taken away for long periods of time, and others came back a shell of what they once were. More and more children were denied good family life because of these losses or absences. Not only were fathers away, but mothers had to devote time and energy to tasks other than the rearing of their children and homemaking. The children of these families suffered the consequences. They in turn could not do well as parents when their turn came, and on and on through each successive generation.

Economic pressures have added to the woes of the family. Millions more were and are disrupted by the mothers' being forced to work. Even more babies and children were and are being deprived of good parenting. The number of babies and children who are now deprived of good family life is

increasing geometrically. When a child is denied good parenting, he develops personal disturbances of one kind or another, he passes these psychological difficulties on to his children, and ultimately society loses its vitality as the number of disturbed people increases.

Disturbed Childhood

The most obvious consequence of disturbed childhood development is the inability to make lasting commitments. Especially fragile is the heterosexual commitment and the capacity to produce children and take good care of them so they will grow up to be healthy men and women.

Look at what is happening in our country. The overall divorce rate is now 40%, and 59% of second marriages end in divorce. In California more young people are living together than are formally married. The number of unmarried couples in the United States has doubled between 1970 and 1975. Currently there are 1.3 million such couples. Those who are living together have answered Nature's mating call but they lack the psychological wherewithal to make the commitment stick. While there certainly are legitimate reasons for marriages to terminate, the vast majority end because of personality difficulties which prevent the couple from living out their love for each other in a committed marriage. Those personality difficulties are directly traceable to their childhood development. The progressively weakening heterosexual bond is an extremely ominous sign.

The children of these incomplete commitments or those from the millions of broken homes will rarely develop their full potential and many will become the social liabilities of tomorrow, to one degree or another. Furthermore, the suffering and psychiatric illnesses these individuals will endure defy estimation. Incidentally, the marriages of the young usually break up with the coming of children.

The typical picture is for the children to range in ages from six months to six or seven years, exactly when the developing child needs human input of the highest quality. Think of the millions of children who are being denied good family life but who, nonetheless,

will become the adult Americans of tomorrow. Will they be able to commit themselves to high values, high quality and become masterful? Many will not.

The 11 million children being reared by a single parent, usually a woman, provide another shocking perspective on the gravity of the situation. One million of these children are under three years old. One-half of the nation's annual product of 13.5 million babies who will be born to mothers between 18 and 24 years old will be illegitimate. Unmarried black women of that same age range will bear two-thirds of all the babies, that is to say, 78% of the black babies of that 13.5 million will not have a father. I believe the nation's overall rate of illegitimacy is around 20%. Thirty percent of the births in Chicago (200 thousand) each year are illegitimate, 33% in New York City, and 50% in Washington, D. C. It is estimated that 45% of the babies born in 1976 will be living with a single parent before they are 18 years old. These births go on year after year, after year. In 20 years on-half the young Americans will not have grown up in a solid family.

These statistics reveal the obvious failures in family life in the sense of making an established heterosexual commitment durable. There is another form of failure in family life, the extent of which cannot be translated into a statistic. I am referring to those families which do not disintegrate, but within which there are severe strains between the husband and wife. These strains are nearly always caused by imperfections in the personalities of the man and woman, the most common of which are irresponsibility and weakness in the man and unfeminine qualities in the woman.

In untold numbers of marriages there is either emotional distance or open warfare or the inability to cooperate with each other and live in harmony. Such patterns in parents always produce children who will have psychological difficulties of one kind or another. To give you an idea of how weak men have become, a recent poll of 10,000 families revealed that, in 70% of the families, men do not

attend to the family finances. As you may recall, CBS radio recently devoted an entire weekend to the question of what is happening to the American male. He is becoming emasculated just as more women are becoming "liberated" from their biologic and primary destiny which if not fulfilled will ensure the collapse and extinction of mankind. A recent issue of *Newsweek* provides a shocking description of role reversal in the home and between men and women generally. In addition, there are 2.2 million men who are "househusbands" whose wives are the breadwinners.

Wave Of The Future?

These changes have led to an ominous social movement which many women believe is the wave of the future that will at last provide the woman her long overdue and just rewards on this earth. I am referring to the mass exodus of women away from the home when they still have small children and the associated belief that it is more worthwhile to enter the labor force than to rear children. The leadership of the women's liberation movement believes this exodus is constructive and encourages it. Some even applaud women who divorce their husbands.

As fewer and fewer families have been able to produce healthy children, these children, when they become adult, must find a way of life which is tolerable to them and which does not include the deep and full commitment to the making of a family of their own. Men who cannot be good fathers have an easy out because traditionally and by necessity they have worked outside the home in order to provide for the needs of their families.

While the women's liberation movement undoubtedly grew because of some genuine social inequities, it is my belief that a large part of perhaps the major motivation behind that movement was and is the psychological need to create a way of life which excludes the making of a home and the creation of a family or removes them from these responsibilities. The roots of those psychological needs can be found in their own childhood development.

THE FAMILY & THE FUTURE OF AMERICA

Psychologically Troubled Women

It is my impression that some of the more militant leaders of that movement are psychologically troubled and embittered because their efforts at making a happy and successful family failed — and this implicates the men in their lives who were in all probability irresponsible or tyrannical or who simply deserted them.

Some of these women are admittedly homosexual. The negative impact of this movement on young women and on the family is enormous. Women who are making families are being told that they can find their true worth and ultimate fulfillment only by taking up a vocation or a profession. Many women heed this call and their children, especially pre-schoolers, are the losers, and eventually so will be society. Many young women who have not married, but who are struggling with unconscious conflicts having to do with feminine identity and heterosexual commitment, are lured away from the making of a family. Please understand, I do not advocate the making of a family for every woman. But many young women are being lured away from their highest destiny by the liberation movement, and when they discover their mistake it may be too late to opt for a family career.

I am well aware that many women have to take jobs because of economic need. Inflation is profoundly destructive of family life. I am also aware that when children are well launched into life it makes good sense for a woman to resume working outside the home if she so desires. And, of course, unmarried women must support themselves. Listen to this alarming statistic. Fifty-four percent of women with children up to teen-age are working, and 39% of working women have pre-school children.

The absence of these women, particularly those with pre-school children, will almost always have a negative impact of some degree on childhood development. Small babies need object constancy, that is, the continuous input of good mothering. Some of the most severe damage to

human development can be done to the human spirit when the child-mother bond is discontinuous or broken during the first three years of life. Volumes have been written about this. When children are small and the mother is away most of the day, the quality of life in the home changes dramatically; only her presence can fill the void. I wish I could adequately convey to you the enormous importance of good mothering. *Only* mature women can supply it.

A National Symptom

It comes as no surprise to me that suicide is now the second highest cause of death of the young or that loneliness is a national symptom. These youngsters are lost, are filled with anguish, and finally so overcome by despair that they terminate the most precious gift of all — life itself. It is heartbreaking to listen to the outpourings of the young who see what life has to offer but who cannot grab hold and make their own lives go forward. The causes lie within them. Those disturbances were formed by imperfect family life. Loneliness is becoming a national illness. People are not just lonely because they are alone. They are lonely because they are empty inside, and that comes from not having had good family life as children.

Drug usage among the young is not just a passing fad; it is an expression of the inner condition of the user. The user is seeking escape from psychic pain, from loneliness, from life that fills him with anxiety and despair. The excited state gives him courage. Other drugs lull consciousness. The end result is a poisoned human spirit which loses its effectiveness. A consistent finding in the drug user is the absent father during the formative childhood years. His absence overstresses the mother who cannot attend fully to her role as mother. Drug usage in America is completely out of hand and will be a key element in our self-destruction. At least 45,000,000 Americans smoke pot regularly. We are being asked to liberalize the laws, and even the psychia-

trist-adviser to the president would have us liberalize our laws on pot rather than eradicate this poison.

It is no surprise that the Presidential Commission on Mental Health estimates that 8 million American children need immediate help for psychiatric disorders. I have read estimates which reach 30 million. I believe the latter figure. In view of the disintegration in the durability of the male-female bond, the collapse of so many families, and the inability to make a complete bond by those who attempt it, that figure is or surely will be a mere drop in the bucket in the near future.

Destroying The Schools

In view of the deterioration of family life, it is no wonder that, in one year, 70,000 assaults were made on teachers, that 100 murders were committed in schools, and that a billion dollars worth of property damage was done to schools. Schools in large cities reflect decay. Students in big cities are four to five years behind the level of achievement of children from smaller cities. These children are full of rage as a result of emotional deprivations and lack of authority within the home; they lack the inner controls to abide by external rules, by simple codes of human conduct. How can they be expected to behave in a civilized manner when they were deprived of civilizing experiences at home?

Veneral disease has reached the epidemic level, there having been 10 million cases reported last year. Who knows how many cases were *not* reported! Realistic constraint on the sexual impulse is part of morality. You all know what is happening to morality in America. Give into your impulses anytime, anywhere and with anyone has become the "do your own thing" ethic of today. Epidemic veneral disease is part of the price — along with those millions of illegitimate babies — that we are paying. Does it surprise you that there are one million run-away children each year? Cultures which do not place appropriate restraint on sexuality eventually de-

cline. The open display of pornography reflects this decline, as well as unrestrained sexual mores.

Child Pornography, Prostitution

Do you know what adults are doing to these runaways? They are not being gathered into the arms of a compassionate society; rather, they are being exploited by evil adults for prostitution and pornography. Child pornography has become a multi-million dollar business. That means millions of Americans enjoy looking at child porno. In Los Angeles alone, 30,000 boys and girls were exploited for child pornography and child prostitution. Do you see how these facts reflect what is happening to the American character, to the spirit of America?

The prevalence of child abuse is skyrocketing — 1,600,000 instances last year. Small wonder, in light of the kind of family life which the abuser probably experienced as a child! You all know what patience, generosity, tolerance, self-control and capacity-to-stand-frustration it takes to rear a child. Child abusers do not possess these qualities; they did not receive such fine humanness from their parents; they were often physically abused themselves. They are passing onto their young what was done to them when they were young and the consequences of what was *not* done for them.

Homosexuality is on the increase as could have been predicted. This condition is abnormal; the cause has been unequivocally traced to childhood experiences within the family and to the personalities of the parents and the nature of their relationship. One's biology does not cause the condition. The increase in this form of psychopathology is directly related to the faulty psychological development of the child within his disturbed family.

It is an ominous fact that the gay movement is having its way of life redefined as a simple variant of normal human sexuality and woven into the fabric of society. I know of three professional organizations — the American Psychiatric Association, the American Psychological Association, and a public health association — who have endorsed this change in viewpoint.

Bills have been presented in Congress and in many state legislatures which would make it illegal to discriminate against anyone because of sexual preference. This means that homosexuals can "marry" and have access to any and all aspects of society, including the classrooms of our young. The young should be exposed to, guided and taught by the healthiest individuals possible. Homosexuality is an abnormality and there are many heterosexuals who should not be teachers. It does not surprise me that mental health professional organizations haven't taken a stand, for many of these professions include in their ranks persons with personal difficulties of their own which make them sympathetic to gays.

25 Millions Gays

A spokesman for the gays told Mrs. Jimmy Carter that there are 25 million gays in the United States. Dr. Abram Kardiner, a distinguished physician, psychoanalyst and anthropologist, notes that homosexuality reaches an epidemic level in societies in crises or in a state of collapse.

I have the same compassion for homosexuals as for all others who are bedeviled by psychopathology; they cannot help being homosexual. This condition is not freely chosen; it is imposed on the individual by unconscious fears and guilt which are the result of faulty childhood development. I am, however, vehemently opposed to having this condition called normal. We are indebted to those persons who call a spade a spade on this issue.

Some of these social phenomena which I have just mentioned are symptomatic of the disintegration of America, that is, they are the glaringly abnormal outward face of an underlying process. In addition, there is a more subtle change taking place in the American character although it is exceedingly important. Americans taken in the aggregate do not demonstrate the clarity in sexual identity differentiation as clearly as in the past. Read Charles Winnick's book, *The New People, Desexualization in America*, and you will be shocked by what he describes. This trend is obvious in clothing styles, hair styles, etc.

Militant Feminists

The very fine and democratic concept of equal opportunity (which is backed by the equal opportunity, equal pay, and civil rights acts) is being misinterpreted as meaning that everyone is equal. As a result, industry and the labor market in general are being forced to place women in positions which should be filled by men, and men are increasingly filling jobs which women have traditionally filled.

The fires of this trend are, of course, being fanned by militant feminists and by many men who have become progressively passive and less responsible to their families and other commitments. Everyone should have an equal opportunity, but as people pass through life, differences in ability and capacity emerge and, as a consequence, some individuals do better in some positions than in others, and so on. The current trend is to consider men and women interchangeable in a vocational sense and even within the family. We are told that men can be mothers while women assume the role of breadwinner. The increasing component of psychopathology which has crept into the American character is causing our society to overimplement social legislation to such an extent that it is rapidly becoming a taboo, if not an outright crime, to acknowledge the difference between male and female.

While this phenomenon may seem ludicrous to you, the implications are in fact quite grim. A systematic search is being made in order to purge all "sexist" phraseology — that is, reference to male or female — from all governmental regulations and guidelines. Senator S. I. Hayakawa says the U. S. Civil Rights Commission is prying into the private business of book publishing in order to eliminate from all textbooks what it labels "sexist bias," that is, words or pictures that assume differences between males and females or show them in traditional roles such as mothering. He believes that the next step will be pressure from HEW to use only federally sanctioned books. Dr. Benjamin Spock has already deleted references to boy and girl in his revised book on child rearing. What utter nonsense!

CONTINUED ON PAGE 49

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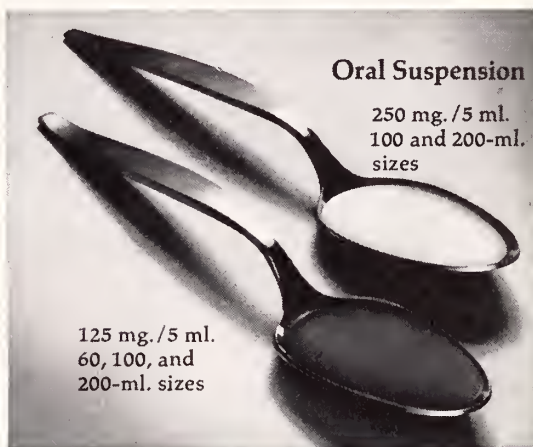
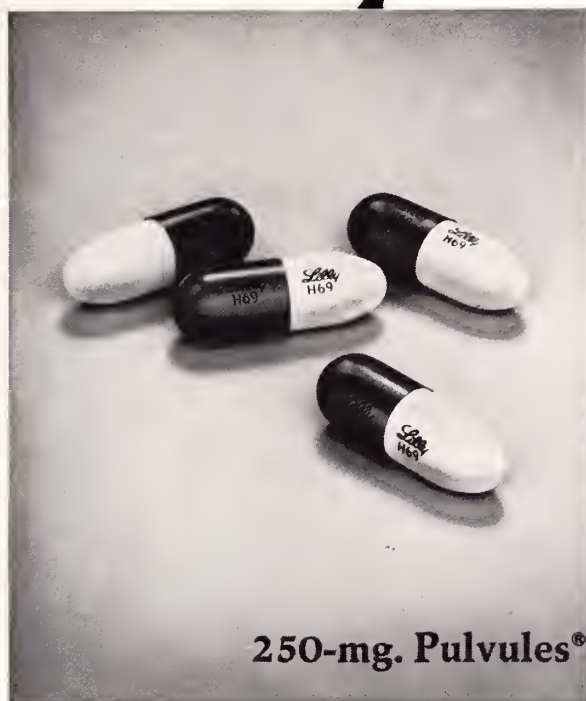
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1. Goldberg HL, Finnerty RJ, Cole JO: Doxepin: Is a single daily dose enough? *Am J Psychiatry* 131:1027-1029, 1974.

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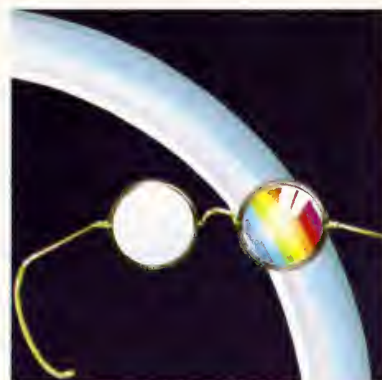
Adverse effects occurring infrequently include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as sweating, tachycardia and hypotension. Weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash and pruritus may also occur.

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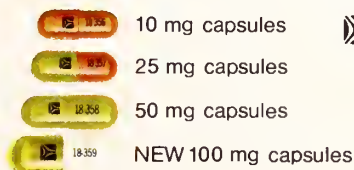


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Alcohol Detoxification: Central Clinical Problems In A Psychiatric Setting

Carlos F. Ramirez, M.D.
Howard E. Wells, M.A., P.A.-C.

It is difficult to find comprehensive teaching material or even an adequate brief review of the acute medical aspects of alcoholism. Most material seems to present the problem of withdrawal as a sequence of rather clear stages and forgets that the patient may not conform to a didactic medical transcription.

The patient is rather a mixed clinical picture in which symptoms and signs in each case are combined into a unique interpretation of the abstinence syndrome. More often than not additional underlying and intercurrent factors of different etiology and pathogenesis complicate both the presentation and the prognosis. Therefore, we will point out particular diagnostic factors which, if misjudged, could present catastrophic consequences.

Our particular viewpoint requires neither extensive knowledge nor presumes perfection, but is only the pursuit of practical considerations that will help the professional with detoxification as it occurs in the psychiatric environment.

Working Class Patients

The setting in which we see patients is a combined 18-bed detoxification and 21-bed rehabilitation unit in a V.A. psychiatric facility. The hospital is located in a southern metropolitan area. The patients on our unit are working class. Typically, they are painters, carpenters, sheetrock workers and laborers. We suspect that there are a larger percentage of deteriorated types than would be seen at most such facilities. Nevertheless, we frequently treat the middle class, the educated and occasionally the professional.

We have organized our paper into four questions to be answered. We will first try to justify this division of presentation and then explain in detail the topics inherent in our questions. Finally, we will summarize our observations with regard to treatment.

At the time the patient presents for detoxification these four important questions are asked:

1. *Is he actually in withdrawal?*

Mistaking an acutely intoxicated patient for one in withdrawal is not an unheard of occurrence. The results can be dangerous for the patient. How you identify the alcoholic profile will ultimately determine if you are in fact treating an alcohol withdrawal syndrome or one of many possible medical problems. More often than not the presentation is a combination of problems that includes withdrawal. This is why it is important to evaluate the degree and depth of withdrawal manifestations, if it is the first such episode the patient has had or, if not, how it differs from previous ones. You should note whether somatic and psychic expressions are in accordance with each other. In general, you are trying to determine if emergency or routine measures are called for. Never underestimate the withdrawal constellation, for it can be simple or it can be lethal.

2. *Is he presenting symptoms of psychosis?*

Your understanding of these symptoms should tell you the difference between the alcoholic psychosis and the schizophrenic alcoholic. The psychological, sociological and chemical approach to the alcoholic who develops a psychosis is very much different from a person with a primary schizophrenic illness. There may be common pathways, but the causes and effects are different and should be handled accordingly. A proper psychiatric evaluation is essential in making this determination. In the context of the alcoholic, addiction is the objective and the psychosis is secondary. If the patient is actually psychotic, and we fail to concentrate our effort on the identification of his psychopathology, then the door is open to potential homicide, suicide or a progressively more complex masquerade of his symptomatology. If we only detoxify the psychotic, it is likely that he will

continue to drink in a futile effort to integrate his mental disorganization. As the years of drinking continue, it will take even more careful interrogation to unmask the primary disorder.

3. *Is he presenting symptoms of primary depression or secondary depression?*

You should be able to recognize the clinical syndrome "depression" as a cause or effect of the alcohol abuse. It is our firm conviction that as soon as the patient has completed withdrawal his secondary depression will gradually dissipate and that by the end of the fourth day no equivalent depression will be evident. The patient may even forget how depressed he was. The complete stabilization of his acute physical and mental distress will contribute to the resolution of this secondary depression. In contrast, the neurotic depressive remains "down" because the psychogenic factor has not been removed. Becoming sober again only serves to aggravate the underlying condition. An understanding of the psychodynamics is important here to avoid a fatal outcome such as a drug overdose or a "casual accident."

4. *Is he showing symptoms of impaired brain tissue function?*

You must be able to differentiate acute (reversible) organic brain syndrome from the chronic (irreversible) form as well as mixtures of the two. They may also be separated into psychotic and non-psychotic forms. The majority of acute episodes deal with patients who combine alcohol ingestion with other sedatives (barbiturates, meprobamate, Librium, Valium, etc.). This is why we stress an accurate history of alcohol and drug intake. The acute organic brain syndrome patient will become less confused after a few days. The prognosis is usually excellent, and the patient can resume his previous activities. Nevertheless, we must be careful to remember that as one drug clears the action of another may become more evident, and the acute organic brain syndrome patient will present cycles of clearance alternating with periods of confusion and disorientation.

We should be in position to detect the progressive changes, irreversibles in the deterioration of the alcoholic, because of the long-term medical and social consequences. The chronic organic brain syndrome patient does not make a good candidate for costly rehabilitation programs, but we can provide security and a controlled medical and social milieu.

Two Objectives

To adequately answer these four questions you should strive for two objectives. The first objective

is to obtain adequate information from the family. However, keep in mind that even a greatly intoxicated patient can usually be interviewed and important data obtained regarding the social, medical and psychological history. In fact, the patient is often very candid and is likely to give more facts about his recent drinking and provide more insight while intoxicated than when sobriety brings his defenses back into play again. Nevertheless, a high degree of suspicion always should be retained. If the patient simply desires hospitalization, he may greatly exaggerate both his behavior and statements regarding his drinking. Also, he may overlook or misinterpret important physical problems. This is especially true with regard to injuries and is a reason why he should be examined closely from head to foot. A listing of some important admission data is included below.

Open or Concealed?

The second objective is to observe the patient's gestures, mannerisms and tone of voice. Is the patient open or concealed in his behavior? Is he hostile or threatening? Does he show abrupt mood changes, such as from crying to cynical laughing? Note how the patient begs or how he challenges, and how certain he is about his condition. The alcoholic can move you to tears with his tragedy, flatter your vanity, or hurt your pride. Thus the second objective is to see through the masquerade of manipulation and to make a clear assessment of the mechanism of each alcoholic patient and to determine what special measures will be necessary.

Important Admission Data

- a) Amount of consumption (volume in pints, fifths, cans per day)
- b) Initiation and termination of drinking (time)
- c) The kind of alcohol consumed (bonded whiskey, moonshine, wildcat, or white lightning, beer, wine or cooking sherry which is also called "salted dog," isopropyl alcohol in the form of rubbing alcohol, after shave lotions or "green lizard" and hair tonics, methyl alcohol in the form of canned heat or Sterno)
- d) Other drugs used with the alcohol
- e) History of previous delirium tremens, hallucinations, alcoholic blackouts, and seizures (Be specific about the nature or kind of hallucinations)
- f) Previous hospitalizations, medical diagnoses and medications in the use (note particularly any chronic health problems)
- g) History of recent injuries or accidents especially head or neck injuries.

- h) Behavior pattern with and without drinking
- i) The drinking pattern and development of tolerance (continuous or binges, drinking alone, morning drinking, gulping, drinking on the job, taking alcohol as medicine, giving preference to alcohol over other activities)
- j) A brief social history (note if he is married or living alone and if he is employed, note who brought him to the hospital and why he felt it was necessary to come)

Withdrawal Syndrome

Textbooks of medicine and current literature tend to break the problem of withdrawal or abstinence into minor (early) and major (late) stages as if one, with all its attendant symptoms and signs, regularly followed the other in logical succession.^{1,2}

This is not necessarily the case. The importance of relative abstinence and initiating factors should be emphasized. We know the patient may go into full-blown delirium tremens while still drinking at a hefty pace, if it is relatively less than what he had been drinking for a sustained period. Infection, injury or surgery may set off delirium tremens with or without the customary time interval of abstinence, usually thought to be 48 to 96 hours.

In point of fact, the critical determinents of the severity and duration of alcohol withdrawal symptoms are simply not known and do not appear to be directly related either to the volume of alcohol consumed or the duration of the drinking spree.³ The multiple factors involved are genetic, constitutional, socio-cultural, climatic, and behavioral. Thus, the amounts of alcohol consumed and the kinds of alcohol only furnish a rough guideline as to what may be expected.

The confirmed alcoholic is well aware of the possibility of delirium tremens after a prolonged binge, and he is likely to taper his drinking in an effort to avoid this outcome altogether or at least until he can get into the hospital. The presence of tremors, agitation, or hallucinations seems to be most often interpreted as indications of impending withdrawal. Thus, we find most alcoholics presenting to the hospital intoxicated rather than in actual withdrawal, and real delirium tremens is quite uncommon. Continued drinking until the patient reaches the hospital appears to serve two purposes for him; to make admission easier or more certain and to control psychomotor excitability. Of course, when an occasional patient arrives in a manifest state of delirium tremens you will suspect that something out of the ordinary terminated his supply of alcohol or more than likely he became

ill, injured or immobilized due to weakness or peripheral neuropathy.

What we want to emphasize is that there is simply no set rule for the withdrawal syndrome. Each person will display a rather individualized pattern only partly related to the way he metabolizes alcohol. Some patients will have "rum fits" (grand mal seizures), some will have predominantly hallucinations, and others will show the full picture of delirium tremens. Also, each patient characterizes delirium tremens according to his own psychophysiologic framework. In some instances confusion predominates and in others hallucinations with delirium.

Toxic Psychosis

How do we know we are facing true delirium tremens? In our consideration, this outcome is a withdrawal symptom of alcohol addiction and is a toxic psychosis. In most instances the psychosis begins while the patient is still drinking. These patients misinterpret the environment and are apt to be distrustful, delusional and panicky. Greater degrees of psychomotor and autonomic overactivity and more profound disorientation are likely to be associated with delirium tremens.⁴ The following is a listing of some important clues to the diagnosis of delirium tremens.

Diagnosis of Delirium Tremens

- a) A patient with an alcohol addiction profile, i.e., history of previous major withdrawal syndromes, heavy tolerance to alcohol, and long habituation. Usually an older patient.
- b) The history of a long alcoholic binge which has suddenly been terminated or greatly reduced by illness or injury.
- c) A recent seizure may closely precede the onset of delirium tremens.
- d) Moderate fever, leukocytosis, dilated pupils, tachycardia, profuse perspiration and other vasomotor liability.
- e) Severe confusion and disorientation appears in all cases.
- f) There is a coarse tremor of the hands, tongue and face, particularly in the circumoral area, but he shakes all over.
- g) A fright, terror or panic reaction may occur and is often triggered by vivid hallucinations (usually of animals such as snakes, insects or rodents) and delusions (such as FBI agents or Russian spys trying to kill them). Tactile hallucinations such as bugs crawling on the skin. Combative behavior may occur.

- h) A history of poor nutrition or disturbed water balance in the form of either dehydration or overhydration.
- i) The patient is usually unable to eat or sleep and may move continuously as if picking at the bedsheets or his clothing. He may fumble for several minutes in a futile effort to remove a pack of cigarettes from his shirt pocket.
- j) Albuminuria occurs in about half of the cases.
- k) The illness may resolve in three or four days, but death may occur in as many as 15% of the cases due to hyperthermia, peripheral circulatory collapse or other unknown events.

Complicated Picture

Whatever pattern the abstinence syndrome takes, the picture may be complicated by a variety of medical problems. There are essentially four categories of problems.²

- 1) Secondary metabolic effects—The most common problems to manage here are hypokalemia, hypoglycemia, hyperglycemia, metabolic ketoacidosis, hyperuricemia, lacticacidemia and overhydration.
- 2) Alcohol-induced diseases—Cirrhosis with the associated problems of ascites, encephalopathy, varices and hepatorenal syndrome is common in various degrees of severity. Alcoholic hepatitis when it occurs should be easily recognized by the characteristic liver function profile and clinical findings. The death rate from this condition is substantial and cirrhosis develops in approximately half of the patients who survive. Acute pancreatitis may be so mild that it is hard to detect or it may prove to be rapidly fatal. Alcohol may induce simple gastritis, peptic ulceration or life threatening GI hemorrhage by a number of mechanisms. Peripheral myopathy and cardiomyopathy is probably not recognized as often as it occurs.
- 3) Alcohol-associated disorders—Malnutrition, anemia, dehydration and some degree of either induced or associated deterioration appears to be common in our experience. Peripheral neuropathy is our most frequently encountered neurologic problem caused by nutritional deficiency. We see this disorder in all forms from slight numbness and paresthesias in the extremities to complete paralysis which may be confused with stroke. True Wernicke's disease and Korsakoff's psychosis is less common. A disproportionate number of alcoholics suffer from chronic obstructive lung disease, Tuberculosis, and oral cancers. Toxicly induced dysrhythmias occur in young

and old alike. In our experience, trauma is likely to be in the form of minor head injuries and ankle or foot fractures. It is common to find a chronic drinker with a history of multiple fractures and sprains of both ankles. The loss of muscle tone, restlessness, and incoordination makes the ankle very vulnerable to injury. While we are always alert for the dreaded subdural or other internal hemorrhage, it is multiple injuries of the extremities, often complicated by peripheral neuropathy, that occupy most of our time.

- 4) Concurrent problems not directly alcohol related but common—Included under this category is diabetes mellitus, seizure disorders not related to withdrawal, hypertension, and the abuse of sedatives or tranquilizers usually in a pattern which allows continued alcohol consumption.

Psychotic Response Pattern to Alcohol

The psychotic response pattern to alcohol, or alcoholic psychosis should be differentiated from cases in which alcoholism has masked a schizophrenic illness. Alcoholic psychosis is characterized by the following:

a) Illusions—Difficulty in perception of form and color. Shadows on the wall may be misinterpreted. Tree branches along a dark path seem to be swaying down to engulf the alcoholic. Sounds may be mistaken for voices. For example, screeching of brakes may sound like women screaming. Various fantasies are built up around such misinterpretations.

b) Delusions—Confabulatory, persecutory or paranoid delusions, the absurdity of which are not recognized by the patient at the time, may be present. Such delusions frequently concern the infidelity of their wives.

c) Hallucinations—These may often take the form of vivid nightmares and accusing or threatening voices. The voices the patients hears typically refer to him in the third person. Should the auditory hallucinations persist in a setting of correct orientation and without the presence of visual hallucinations for a period of two weeks, the possibility of primary psychosis should be considered.

The Voice of God

In alcoholic psychosis there are no lasting primary symptoms of schizophrenia such as disturbances of affect, association, or the presence of autism and ambivalence. The schizophrenic alcoholic is more likely to interpret auditory hallucinations as directed to him or addressing him and as coming from God or nonhuman sources.⁴

Typically, alcohol in the schizophrenic patient helps to make these voices go away and to reconstitute his mental disorganization. One of the best tip-offs to the diagnosis of schizophrenia in the drinking population is a medical record with a consistent picture of similar delusional or hallucinatory material in a patient who has never made even a brief adjustment to life (never married or only briefly, no consistent job record or history of successes, living with patients, relatives or friends). The certainty of the diagnosis is determined by continuous treatment with antipsychotic drugs. The schizophrenic alcoholic maintained on proper medication will not drink again.

The Depressive Response Pattern to Alcohol

We must bear in mind that depression is a basic and essential component in chronic alcoholism. The main causes of this depression are believed to be the following:

Physiological—Sodium retention by the brain tissue, changes in the catecholamine level in the brain and disturbances in REM sleep are suspected in the etiology of depression.⁵ The cerebral toxicity leads in certain individuals to the active operation of repression, denial and projection. These mechanisms appear to be initiated automatically apart from conscious intent with the aim the annulment of the anxiety and mental pain engendered by the physical effect of the brain damage. Such a mechanism might warrant alcoholism being called a "pathoneurosis."

Psychological—An emotionally stressful situation often precipitates a deterioration of the self-image and is manifested by a complex constellation of conscious and unconscious negative feelings such as free floating anxiety, guilt, shame, remorse, and mood swings from anger to extreme despair. There is self-hatred with a concomitant desire for self-destruction. The alcoholic knows that "something" is not right and that very deep he is hurt either by himself, others or the environment and circumstances.

Social—The alcoholic is a very desolated human being. He may withdraw from most social contacts, since interpersonal relations seem to be too demanding. In severe cases, the wish to avoid or escape is manifested in marked seclusiveness. Perhaps, unconsciously he feels a strong desire to end his life as a way of escape from an intolerable situation.

Diagnosis of Depression

a) Mood—The patient feels sad, blue, unhappy, bored, miserable, guilty and lonely.

- b) Self-concept—He describes himself as worthless, no good, born to lose or a terrible person.
- c) Self-punitive—He criticizes and blames himself. He may verbalize suicidal wishes or specific plans.
- d) Somatic—He is usually fatigued apart from the effects of alcohol. He cannot sleep and he has no appetite. He is preoccupied with numerous minor physical complaints especially headaches and low back pain. There is a loss of libido.
- e) Activity level—He displays a reduction in spontaneous activity and an inhibition of action and thinking. However, a sense of restlessness and ceaseless activity much of which is purposeless may occur instead.

Is the depression primary or secondary to the use of alcohol only? Secondary depression is characterized by a vicious cycle consisting of three phases:

1) Elation phase—This phase is manifested by a lack of inhibition or freer expression of repressed tendencies.

2) Depressive phase—This phase is the result of the depressant, paralyzing effects of alcohol.

3) Guilt and shame phase—This means reverting to the original emotional stress situation with guilt and shame as a reaction. There is deterioration of the self-image and continued drinking to combat the feeling of depression. There is typically no history of precipitating events or of depression.

In primary or psychogenic depression we can elicit a history of previous mood swings, cyclothymic personality patterns or precipitating environmental factors. In primary depression, thinking is an expression of efforts to overcome feelings of actual depression.

The anxiety and hence depression is partially allayed by drinking. Primary depression is precipitated by the following:

1) A neurotic depressive personality whose ego feels incapable of fulfilling its aims or aspirations. These people are pessimistic, inadequate, and without purpose or direction in life.

2) A cyclothymic personality with displays of mood swings between elated agitative behavior and retarded activity levels. These swings are often diurnal.

3) Significant loss which may be a person, material possession or loss of status.

It is difficult to draw a sharp line between neurotic and psychotic depression, because depression is displayed more as a quantitative continuum without clear qualitative distinction between phases. Depression becomes psychotic when bodily

complaints move in the direction of feelings or delusions of unreality and loss of reality is accompanied by hallucinations or greater degrees of psychomotor retardation.

The Organic Brain Syndrome Response to Alcohol

Organic brain syndrome is included among the alcohol induced diseases. It can be classified as either acute (reversible) or chronic (irreversible) and as psychotic or non-psychotic. In the non-psychotic organic brain syndrome neurotic symptoms such as depression, anxiety, obsession-compulsion may become apparent. In the psychotic organic brain syndrome the psychosis may include delusions, illusions, and hallucinations. There may be gross interference with the individual's ability to meet the demands of life, because of a deficit in memory or perception or because of profound mood alterations.

The acute organic brain syndrome is reversible, but in some cases there will be a progressive deterioration that ranges from slight impairment of such faculties as intellect, attention, and memory to global deterioration of the personality functioning (alcoholic dementia).

Often intellectual deterioration is entirely limited to a deficiency in short-term memory, while other aspects of the personality remain intact. A progressive deterioration spreading to other faculties is not necessarily the rule, and there are even occasions when deficient functions improves even if only transiently.

Organic brain syndrome due to alcoholism must be differentiated from organic brain syndrome due to poisons or drugs, trauma, endocrine disease, nutritional or metabolic disorders, intracranial neoplasms, senile or pre-senile dementia, CNS syphilis, and other infections. Systemic disease must be ruled out even though the presenting complaint may be psychiatric or neurological. Detailed studies of the mental status are advisable in cases of head injury, brain tumor or epilepsy.

Chronic organic brain syndrome in alcoholism is predominantly of nutritional origin. Wernicke's disease, Korsakoff's psychosis, alcoholic cerebellar degeneration, and polyneuropathy are generally different clinical aspects of the same nutritional deficiency problem; the B group vitamins.⁴ Ocular disturbances and ataxic gait are fundamental symptoms in Wernicke's disease and constitute a medical emergency. In Korsakoff's psychosis, impaired memory (retrograde amnesia) and impaired ability to acquire new information (anterograde amnesia) are the chief features which are believed

to develop directly or insidiously from the Wernicke's disorder.^{6,7}

The organic brain syndrome produced by cirrhosis and portalsystemic shunts in another whole range of problems from hepatic stupor and coma to hepatocerebral degeneration.

Diagnosis of Chronic Organic Brain Syndrome

- a) Deterioration—There is a progressive breakdown of intellect, temperament and character.
- b) Memory—Impairment of memory for recent events is particularly common, but a "spotty" loss of memory with or without attempts to fill the gaps with fabrications may occur. The skilled worker may be unable to learn new tasks, and he may have difficulty doing mechanical work that he has previously done for years.
- c) Attention—Difficulty in arousing, sustaining, and focusing attention (distractibility) is frequently encountered.
- d) Judgment—There is an inability to make sound decisions, a tendency to commit social indiscretions and these patients may express grandiose ideas or plans.
- e) Intellect—There is progressive disorganization effecting the thought process often noticed as incoherence of speech, poverty of thought content, stereotyped repetition that may be called rumination, and loss of vocabulary.
- f) Affect—Impairment of affect is characterized by emotional lability, excessive response to minor stimuli, or these patients may appear dull, shallow or unresponsive.
- g) Personality changes—Exaggeration of previous personality traits, apathy, indifference, or active negativism (a reluctance in conversation or behavior) may occur. A preoccupation with the mouth, anus or genitals is not uncommon where the disintegration of psychological function has been extensive.
- h) Disorders of voluntary movement—These are easily observed when the patient is asked to carry out a simple task. A wide-spread or ataxic gait when not intoxicated is usually noticed by the patient first.

The Treatment Plan

The treatment plan to be presented here is not a total or comprehensive one. We offer it as a basic outline to be used in association with good nursing care designed to allay patient fears and to reduce the danger of medical and psychiatric complications. Also, every effort should be made during the detoxification process to motivate the patient to

accept additional rehabilitative treatment. The usual five to seven day recovery process offers an ideal opportunity to break through the mask of denial and to confront the alcoholic with his loss of control over his drinking habits. The patient must be made aware of the physical damage he is inflicting upon himself.

The treatment of the acute withdrawal syndrome is outlined as follows:

The first order of medication given primarily to reduce anxiety and agitation is chlordiazepoxide hydrochloride (Librium) 50 mg. by intramuscular injection immediately after it is determined that the patient is in withdrawal and not acutely intoxicated. This is followed by 25 mg by the same route every three hours for two doses and then 25 mg orally every four to six hours until severe anxiety is reduced.⁸

Keep in mind that intramuscular adsorption of this drug is often unpredictable. Nevertheless, we feel that it offers the best balance of safety and control required for the majority of patients that we see. When a higher level of autonomic and psychomotor overactivity occurs, 50 to 75 mg intravenously in a slow push offers more rapid control of symptoms.

If the patient has a propensity for seizures, then diazepam (Valium) 10 mg intramuscularly followed by the same dosage three times a day or every four to six hours until symptoms of withdrawal subside is appropriate if the blood pressure is watched and the patient does not have severely impaired pulmonary function. If the patient has a clear history of epilepsy then phenobarbital and/or diphenylhydantoin (Dilantin) should be added. Occasionally, status epilepticus occurs and a different treatment regimen is necessary to bring the seizures under control.

The second order of medication to be used in elderly patients and those with a poor nutritional status or hypotension, is hydroxyzine (Vistaril) 75 mg. intramuscularly every four to six hours for about a day followed by oral administration of 50 mg. three times a day until symptoms subside. In confused patients and those with toxic drug combinations with alcohol or in severe hepatic dysfunction, the choice is oxazepam (Serax) 30 mg. orally followed by 15 mg. every four to six hours as necessary to control anxiety and agitation. Oxazepam has the advantage of short to intermediate duration of action and has no active metabolites. Thus, in the presence of hepatic dysfunction, cumulative effects are less likely.

In the presence of severe complications such as delirium tremens, Wernicke's disease or acute metabolic and electrolytic disturbances, it is also

advisable to administer a vitamin B complex preparation. We administer Dextrose 50% 25-cc. with Solu-B-Forte 10-cc. in a slow intravenous push. There have been some rare deaths from cardiac arrests reported in the literature during intravenous push of vitamin B preparations.⁹ It is always advisable to dilute the preparation or administer it in a piggyback IV diluted in a volume of the fluid replacement. We also give vitamin B₁ 100 mg. intramuscularly daily for five days and an oral B complex preparation such as Albee with C twice daily for an additional five days to help replace exhausted vitamin stores and thus to lessen neurological complications caused by nutritional deficiency. Unfortunately, in severe nutritional neuropathy you may not achieve complete reversal for months in spite of continued treatment.

In all cases of withdrawal, magnesium sulfate 50% 2-cc. intramuscularly daily for three days should be given when there are no contraindications. Although the debate goes on, hypomagnesemia has been consistently associated with so called "rum fits" and tremors.

We feel that most withdrawal syndromes are complicated by overhydration and consequently fluids are not administered unless there is severe vomiting, diarrhea or profuse perspiration. As long as the patient's output is satisfactory, more harm than good is likely to come from the parenteral administration of fluids.

Hypokalemia is usually corrected without problem by oral supplements. A value of 3.5 to 3.2 mEq./L. is a reasonable level to begin treatment.

Diphenylhydantoin (Dilantin) is indicated early in withdrawal, not as an anticonvulsant, but to improve the active extrusion of sodium from brain cells by stimulation of the metabolic sodium "pump." Although this mechanism is not fully understood, it is also theorized that diphenylhydantoin tends to correct certain transcellular electrical gradients and to stabilize, thereby, brain stem centers against hyperexcitability.¹⁰ We give 100 mg. orally three times a day for five days.

In the treatment of the psychotic response pattern, the first drug of choice is haloperidol (Haldol) 10 mg intramuscularly which may be repeated after two hours. You should not exceed 30 mg. in this time interval. Continued treatment with the liquid concentrate may be used in 5 mg. doses three times a day. If extra-pyramidal problems develop, then Benadryl 50 mg. given very slowly intravenously or given intramuscularly will reverse the condition. We have recently found that

haloperidol intravenously in small amounts affords rapid control of more severe psychotic behavior.

The second drug of choice is chlorpromazine (thorazine) liquid in doses of 50 to 75 mg. three times a day. The injectable form is not advisable because of the greater possibility of severe hypotension. It is also possible to use thioridazine (Mellaril) in 50 to 75 mg. doses three times a day for a short period when an element of depression accompanies the psychotic response pattern. Of course, both of these drugs are more likely to lower the seizure threshold.

When the depressive response pattern is diagnosed as secondary to alcohol, then appropriate treatment of the withdrawal syndrome as previously mentioned should suffice. The depression will gradually lift as the cycle is broken. The key to success here is time. If the detoxification process does not last long enough, there is a strong likelihood that the drinking and depression cycle will be reestablished. A careful discharge evaluation will help prevent a quick relapse.

When the diagnosis of primary depression is clear, the first choice of medication is doxepin

(Sinequan) 75 mg. at bedtime and 50 mg in the morning. Of course, the withdrawal syndrome should be treated first and the depression may be treated as early as the second day. The second drug of choice is amitriptyline (Elavil) 75 mg. at bedtime and 50 mg in the morning while the patient is hospitalized.

Treatment of organic brain syndrome must be directed at the specific underlying cause. In the acutely intoxicated patient, this usually means correction of a toxic metabolic condition. In the chronic organic brain syndrome patient, this usually means correction of a nutritional problem. Hydroxyzine (Vistaril) is a safe drug to use for uncomplicated withdrawal in an organic patient or patient with severe nutritional deficiency. The B vitamins are the primary treatment in alcohol induced diseases of the nervous system.

Alcohol not only displaces food in the diet and impairs gastrointestinal absorption of vitamins, but it also increases the demand for B vitamins. When the possibility of Wernicke's disease is present, our approach is parenteral vitamin B complex as previously mentioned. The danger of worsening the athiaminotic state with parenteral glucose alone should always be kept in mind. Since Wernicke's disease, Korsakoff's psychosis, alcoholic cerebellar degeneration and polyneuropathy are all very similar in etiology, the treatment with B vitamins is appropriate for all.⁶ Also, many of the alcoholic diseases of uncertain etiology are probably nutritional in origin and respond to alcohol abstinence, good nutrition, and vitamin supplements. □

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COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting on August 16, 1978:

- Confirmed the election of Robert J. Henderson, M.D., Marshall and Jackson County Health Officer, effective September 1, 1978.
- Recognized a Canadian physician, Garry S. Humphreys, M.D., as Assistant Epidemiologist, for one year.
- Approved a policy change discontinuing testing for rubella baseline titers except for those patients treated in the county health departments effective Sept. 1.
- Was advised that money for completion of the Jefferson County Laboratory was provided by a recent Session of the Legislature in a bond issue to the University of Birmingham.
- A Hazardous Waste Management Act was passed in the Special Session of the Legislature and became Act No. 129 approved Aug. 9, 1978.
- Approved initial issuance of Assurance of need for 14 projects.
- Received a report from attorneys regarding plaintiff's motion to reconsider and set aside order for summary judgment in the U.S. District Court Case, Birmingham News Company vs. Dr. William Roper, et. al.
- Was advised of the denial of a permit for Serico, Inc., Mississippi, for a radioactive material license in Alabama.
- Was advised of the appointment of Dr. Roy R. Kracke, Jr., by the Alabama Dental Association to the Council on Dental Health of the State Committee of Public Health, succeeding Dr. Roy G. Davidson, Jr., for a five-year term beginning Jan. 25, 1979.
- Received the 1977 Annual Report of Alabama's T.B. Program and was advised regarding progress in the treatment for this disease.
- Was advised that proposals to restrict aid for unborn dependent children would be continued without interruption.
- Received notice of an Attorney General's Opinion of Aug. 2, 1978, stating that in spite of the adoption of Act No. 659, Regular Session 1978, the State Health Department still maintains final supervisory authority over decisions of the Jefferson County Health Department relating to sewage disposal and septic tanks.
- Was advised that a new case of hypothyroidism in infants has been identified and took note of the fact that 18,000 infants have been screened for hypothyroidism.
- Was advised of a telegraph notification from the Center for Disease Control of HEW of a new rabies vaccine to be used in clinical trials that has been developed from Human Diploid Cell Strain (WRV) that is expected to offer a more adequate antibody response than duck embryo vaccine (DEV).
- Was advised of notification from the Center for Disease Control, HEW, of the composition of influenza for 1978-79, which will include antigens of three strains and recommends a dosage schedule for adults over 26 years of age and a separate youth vaccine for ages 13-25, and another formulation for individuals under age 13, which is expected to be available in about one month. □

Brief Summary of Prescribing Information Combined TEGOPEN[®] (cloxacillin sodium) Capsules and Oral Solution

For complete information, consult Official Package Circular.

(12) TEGOPEN 9 11 75
Indications: Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

Important Note: When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

Contraindications: A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Warning: Serious and occasionally fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin therapy. Although anaphylaxis is more frequent following parenteral therapy it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with a history of sensitivity to multiple allergens.

There have been well documented reports of individuals with a history of penicillin hypersensitivity reactions who have experienced severe hypersensitivity reactions when treated with a cephalosporin. Before therapy with a penicillin, careful inquiry should be made concerning previous hypersensitivity reactions to penicillins, cephalosporins, and other allergens. If an allergic reaction occurs, the drug should be discontinued and the patient treated with the usual agents, e.g., pressor amines, antihistamines, and corticosteroids.

Safety for use in pregnancy has not been established. **Precautions:** The possibility of the occurrence of superinfections with mycotic organisms or other pathogens should be kept in mind when using this compound, as with other antibiotics. If superinfection occurs during therapy, appropriate measures should be taken.

As with any potent drug, periodic assessment of organ system function, including renal, hepatic, and hematopoietic, should be made during long-term therapy.

Adverse Reactions: Gastrointestinal disturbances, such as nausea, epigastric discomfort, flatulence, and loose stools, have been noted by some patients. Mildly elevated SGOT levels (less than 100 units) have been reported in a few patients for whom pretherapeutic determinations were not made. Skin rashes and allergic symptoms, including wheezing and sneezing, have occasionally been encountered. Eosinophilia, with or without overt allergic manifestations, has been noted in some patients during therapy.

Usual Dosage: Adults: 250 mg. q 6h.

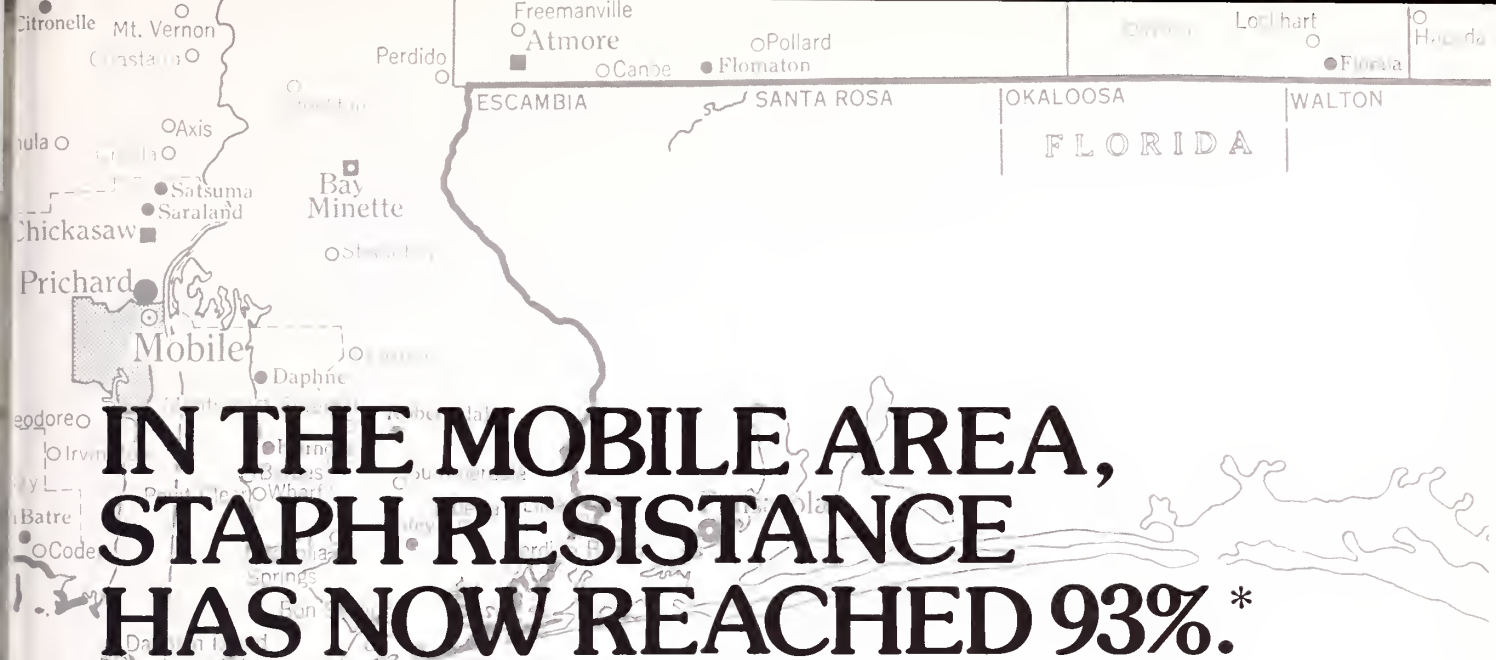
Children: 50 mg./Kg./day in equally divided doses q 6h. Children weighing more than 20 Kg. should be given the adult dose. Administer on empty stomach for maximum absorption.

N.B. INFECTIONS CAUSED BY GROUP A BETA-HEMOLYTIC STREPTOCOCCI SHOULD BE TREATED FOR AT LEAST 10 DAYS TO HELP PREVENT THE OCCURRENCE OF ACUTE RHEUMATIC FEVER OR ACUTE GLOMERULONEPHRITIS.

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*resistance to penicillin G among community-acquired staph infections. Data on file, Bristol Laboratories.

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- Effective against nonpenicillinase-producing staphylococci, beta-hemolytic streptococci, and pneumococci.†

†NOTE: The choice of Tegopen should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates that the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semisynthetic penicillin. The clinical significance of *in vitro* data is unknown.

- 10 times more active against strep than staph.
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‡Maximum absorption occurs when Tegopen is taken on an empty stomach, preferably 1-2 hrs. before meals.



Please see brief summary
for prescribing information



HOW IS YOUR STAFF PERFORMING?

In most medical offices the answer to the above question is not really known by either you or your employees.

You know the office is operating relatively well but unless you have established a system of performance evaluation you can't be sure that each staff person is doing his or her job effectively and carrying a fair share of the work load.

Your employees assume they are doing a good job — if nothing is said to the contrary — but without work standards or performance reviews they really don't know. At a recent supervisory workshop of medical office assistants a show of hands indicated only about 10% of the medical offices represented had written performance appraisals. The majority either did no job reviews or only offered occasional verbal suggestions.

Following are some suggestions in regard to performance appraisal.

First, the performance review and the salary review should not be done at the same time. A salary review is generally done at the end of the year

or on the employee's anniversary date. If you attempt to run the two together, all of the time you are discussing "performance" the employee will be thinking, "How much am I going to get."

If you use a printed appraisal form the employee should be given a copy in advance so that he or she will be familiar with the areas to be covered. The review should not be a surprise to the staff member. A basic purpose of the appraisal is to help the employee improve his or her skills and a good review session requires input from the employee. Staff should be told at the time of hiring that an annual performance appraisal is SOP (standard operating procedure) and that it offers the employee an opportunity to review and improve his or her job skills.

How often do you do a performance appraisal? Many organizations have an annual review program with the employee's review session scheduled about two months before the anniversary date. The performance ap-

praisal does not eliminate the need for evaluating and coaching your employee in an informal manner, for instance:

"Sue, your typing is improving — a lot less typing errors. I also noticed the insurance forms are going out faster. Great job."

The interview should be held at a time and place where the discussion can be confidential and free from outside interruptions. A good time is before office hours when both of you are fresh. Tell the employee at least two weeks in advance of the date to give both of you time to prepare.

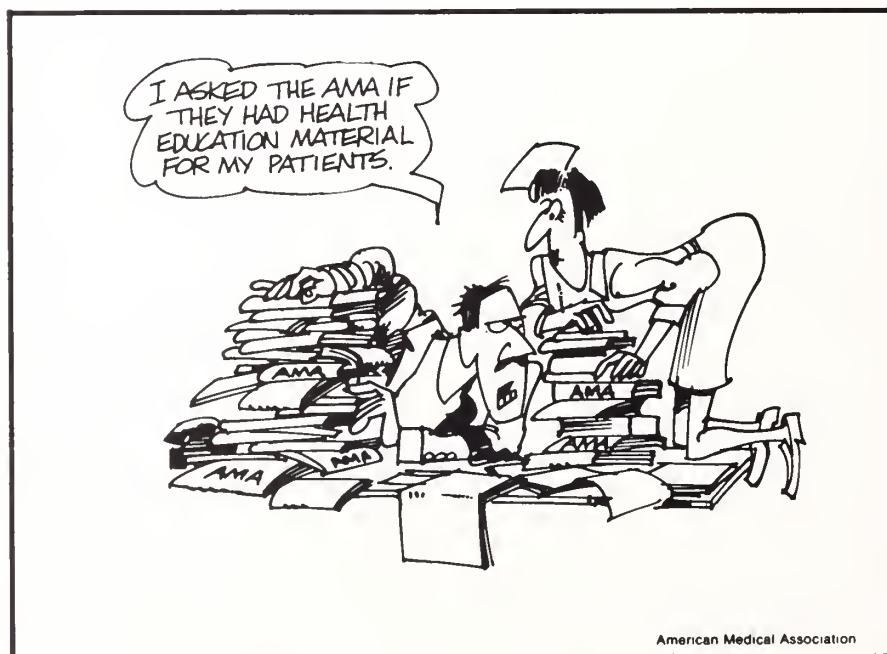
Go over each item on the appraisal form with the employee and ask for comments. Start with the positives — the things on which you can compliment the employee. When reviewing the negatives let the employee analyze and discuss the deficiencies. Find out what plans he or she has for improvement.

If these are acceptable, help formulate them to fit with the office procedure. Reduce the plan to small, achievable steps and set a completion date for each step.

Close the discussion with a compliment. If you can't compliment the employee on anything, you should be looking for a new employee.

Where can you get samples of job appraisal forms? Your local library will have publications on personnel administration that have sample forms with an explanation on their use. There is a good form in *Personnel Administration Handbook For Medical Group Practice, 1977*, published by Medical Group Management Association, 4101 East Louisiana Ave., Denver, Colorado, 80222.

You will find that a performance appraisal program gives you and your employees an opportunity to set goals for continued improvement, achievement and growth. And that's what it is all about! □



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* **INDICATIONS:** Based on a review of this preparation by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:
Possibly effective: In cutaneous candidiasis; superficial bacterial infections; the following conditions when complicated by candidal and/or bacterial infection: atopic, eczematoid, stasis, nummular, contact, or seborrheic dermatitis, neurodermatitis, and dermatitis venenata; infantile eczema; lichen simplex chronicus; and pruritus ani and pruritus vulvae.
Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Viral diseases of the skin (such as vaccinia and varicella); fungal lesions of the skin except candidiasis; history of hypersensitivity to any product component. Not intended for ophthalmic use; should not be applied in the external auditory canal of patients with perforated eardrums; should not be used when circulation is markedly impaired.

WARNINGS: Because of the potential hazard of nephrotoxicity and ototoxicity, prolonged use or use of large amounts of this product should be avoided in the treatment of skin infections following extensive burns, trophic ulceration, and other conditions where absorption of neomycin is possible.

Usage in Pregnancy: Although topical steroids have not been reported to have an adverse effect on the fetus, the safety of topical

steroids during pregnancy has not been absolutely established; therefore, do not use extensively on pregnant patients, in large amounts, or for prolonged periods.

PRECAUTIONS: Watch constantly for overgrowth of nonsusceptible organisms (including fungi other than candida). Should superinfection due to nonsusceptible organisms occur, administer suitable concomitant antimicrobial therapy; if favorable response is not prompt, discontinue the preparation until adequate control by other anti-infectives is effected. If extensive areas are treated or if the occlusive technique is used, the possibility exists of increased systemic absorption of the corticosteroid; suitable precautions should be taken. If irritation develops, discontinue the product and institute appropriate therapy.

ADVERSE REACTIONS: Sensitivity reactions to topical use of gramicidin are rare. Hypersensitivity to nystatin is extremely uncommon. Hypersensitivity to neomycin has been reported and articles in the current medical literature indicate an increase in its prevalence.

The following local adverse reactions have been reported with topical corticosteroids either with or without occlusive dressings: burning sensations, itching, irritation, dryness, folliculitis, secondary infection, skin atrophy, striae, miliaria, hypertrichosis, acneform eruptions, maceration of the skin, and hypopigmentation. Contact sensitivity to a particular dressing material or adhesive may occur occasionally. Ototoxicity and nephrotoxicity have been reported.

For full prescribing information, consult package insert.

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EMS

EMERGENCY
MEDICAL SERVICES
IN ALABAMA:
AN OVERVIEW
BY ALAN R. DIMICK, M.D.

Presented at the
Annual Meeting of the
Medical Association
of the State of Alabama
in Huntsville, on
April 21, 1978

This will be a review of the historical development of emergency medical services and, in particular, prehospital emergency care in Alabama. Obviously this will have a personal bias. I have been involved in the improvement of emergency medical services in Alabama since 1965.

I finished my surgical residency under Dr. Champ Lyons at University Hospital in Birmingham and joined the surgical faculty at the University of Alabama School of Medicine in 1963. Because of my interest in the surgery of traumatic injuries, Dr. Lyons charged me to improve the Hillman Emergency Room. I was also given the assignment of improving care for severely burned patients admitted to University Hospital, and subsequently developed the burn service at University Hospital, of which I am currently Director.

While attempting to improve the Hillman Emergency Room, it became obvious that improvements were needed in the care rendered to patients by ambulance personnel. Many patients received little or no emergency care prior to their arrival in the emergency room.

My interest in prehospital emergency care was further increased by several events in 1967. One of my burn patients received care from ambulance attendants which adversely affected his condition. The other event was an accident involving multiple victims at a local industry. The difficulties experienced in handling these casualties brought acutely into focus the need for improvements in prehospital emergency care. As a result of this crisis the Birmingham EMS Committee was established by a resolution of the City Council in October 1967 to advise the Council regarding planning for day-to-day medical emergencies as well as disasters involving multiple casualties.

This Committee has representatives from police, fire, civil defense, Red Cross, Jefferson County Medical Society, emergency department nurses, hospital administrators, Birmingham Bar Association, Birmingham Board of Education, and the city clerk. I was elected Chairman in 1967 and have continued in this capacity until the present.

The Birmingham EMS Committee meets monthly, usually at one of the local hospitals, which provides a free

lunch to the Committee as part of their civic duty to improve EMS in the community. Thereby an excellent rapport has been developed between physicians, nurses, hospital administrators, EMTs, paramedics, police and fire services. The Committee exemplifies the concept that EMS is a joint responsibility of local government and the medical community. As a result of this cooperative spirit the Committee has accomplished many major projects, and I will review several of these:

- **Revision of the city ambulance ordinance and city ambulance contract** — The City of Birmingham has contracted for private ambulance service since 1954 on an annual basis. Through the efforts of the EMS Committee the city ambulance ordinance and the city ambulance contract specifying equipment on ambulances and training of ambulance personnel has been revised several times to meet current medical standards.

- **Birmingham Hospital Radio Network** — In 1970 six Birmingham hospitals saw the need for vital radio communication among hospitals in our area, and also between ambulances and hospitals. They applied for a federal grant to buy these radios, but were unsuccessful. The six hospitals proceeded to purchase these radios with their own money, thereby greatly improving communications between ambulances and hospitals.

- **County-Wide Disaster Drills** — These have been performed twice a year for the past seven years. All hospitals in the area, physicians, nurses, police and fire services, civil defense, Red Cross and many other agencies are involved in these drills. In the Spring of the year the drill is usually announced and scheduled, while in the Fall it is usually a surprise, unannounced drill. These drills have been very beneficial for our community, because in real disasters with multiple casualties there has been excellent coordination of all agencies involved. Transportation of casualties by ambulance services has been coordinated by the radio command post at the University Hospital Emergency Department, and no hospital has been

overloaded with patients. These disasters have included tornadoes and train wrecks.

- **Development of a Disaster Plan For The Birmingham Airport** — One day after being made aware there was no disaster plan for the Birmingham Airport, the Birmingham EMS Committee developed a plan for an airport crash at the Birmingham Airport. Such planning in a short period of time was obviously facilitated by the excellent rapport existing among the members of the EMS Committee.

- With the assistance of the Alabama Regional Medical Program, members of the Birmingham EMS Committee presented programs in various cities throughout the State to show how emergency medical care and emergency medical services could be improved by the development of an EMS Committee in the local area. Such "road shows" were held in Montgomery, Mobile, Dothan, Anniston and Gadsden. Experience subsequently has shown these road shows were successful in stimulating the development of improved EMS in these areas.

- **Alabama Act 1590:** Because of the early problems experienced in the improvement of ambulance services, the Birmingham EMS Committee was one of the primary sponsors of Act 1590, which was passed by the Alabama Legislature in 1971. This historic milestone did essentially two things. First, the State Board of Health was designated as the state agency responsible for licensure of ambulance services. Second was the establishment of a State Emergency Medical Services Advisory Board to assist in the promulgation of Rules, Regulations and Standards concerning ambulance service. The State EMS Advisory Board consists of representatives of 10 organizations: (1) Alabama Committee on Trauma, American College of Surgeons; (2) Medical Association of the State of Alabama; (3) Alabama Ambulance Association; (4) Alabama Association of Rescue Squads; (5) Alabama Hospital Association; Alabama Department of Public Safety; (6) Alabama Funeral Directors Association; (7) State Health Officer; (8) Com-

munications Engineer of the State Highway Department; (9) Alabama Office of the Highway and Traffic Safety; and (10) Director State Department of Public Safety.

11th Hour Passage

This Act was typical of most legislation in our State, being passed in the very last hour of the 1971 legislative session. A significant exemption to the Act makes members of the Alabama Association of Rescue Squad exempt from the Act. This exemption continues to be a problem in certain areas of our State, because AARS squads do not have to meet State standards regarding ambulance service.

In March 1972, at the first meeting of the State EMS Advisory Board I was elected Chairman, and have been elected Chairman each year since 1972. During 1972 the Board proposed Rules, Regulations and Standards under Act 1590, which were reviewed and approved by the State Committee on Public Health.

A public hearing on the proposed Rules, Regulations and Standards was held on Oct. 24, 1972, with some very interesting testimony. In a room filled with tension, one ambulance company owner testified against the proposed Rules, Regulations and Standards saying "I know I am saving more people than I am killing." Others claimed they were too strict and cost too much. Dr. John Chenault, co-chairman of the public hearing with me, stressed "reasonableness" in the enforcement of the Act. He stated no one was going to be put out of business if they were trying to comply with the Act.

The original Rules, Regulations and Standards were approved and took effect on Nov. 24, 1972. They specified four different types of ambulance vehicles, and a licensure and training program of basic emergency medical technicians were defined. The 81 hour U.S. Department of Transportation Basic EMT course was designated as a standard for Basic EMTs in the State. A radio was required in each ambulance if the hospital it served had a radio, because in 1972 not all hospitals had radios.

Director Clay H. Dean

During 1972 the State Board of Health designated the State Health Department as the central focus for emergency medical services in Alabama including the Enforcement Act 1590. The State Health Department created an EMS Division and Clay H. Dean was designated as Director. Staff was hired to implement the licensure program for ambulances and EMTs, which requires inspectors who literally get in every ambulance throughout the State and test the equipment to make sure it performs properly. Also the State EMS Division staff accredits all EMT training programs throughout the State to be sure students in these programs can be licensed by the State Health Department after graduation.

In 1973, to facilitate emergency medical technician training, the Alabama Regional Medical Program provided a grant to the State Department of Public Health for Basic EMT training. This was accomplished in 40 training sites scattered throughout the State — primarily hospitals, but also some junior colleges and technical schools. This initial stimulus has resulted in EMT training currently in at least 27 sites throughout the State. They are funded primarily through the educational institutions which have liaison with hospitals to provide the clinical aspects of EMT Training.

- The EMS Demonstration Project — This was a joint effort between Birmingham and the over the mountain communities of Homewood, Vestavia Hills, and Hoover. These cities had never before worked with Birmingham, because they had been embroiled in consolidation/annexation fights. Through the efforts of the Birmingham EMS Committee and the over-the-mountain EMS Committees, with facilitation from the Alabama Regional Medical Program and many others, a grant application to DHEW was made. This application was for the provision of advanced life support activities through paramedics providing emergency medical care outside the hospital under the radio direction of a physician. The grant application requested \$3.6 million for three years

to initially involve the four cities, and in three years to expand to the entire six counties in our region.

The DHEW application was unsuccessful, but we received an award from the Alabama Regional Medical Program for \$300,000 for one year to cover the cities of Birmingham, Homewood, Vestavia Hills, and Hoover. I was named Project Director and with the help of my assistant, Miss Ida Martha Reed, contracts were developed between UAB and the three cities — Homewood, Birmingham and Vestavia Hills — to provide advanced life support paramedic services in their fire department.

We decided this initial paramedic training should be accomplished with fire department personnel rather than with private ambulance service personnel because of the higher personnel turnover rate existing in private ambulance services. This training was accomplished within the UAB Medical Center from May to September, 1973.

The EMS Demonstration Project activities were guided by an Advisory Board composed of physicians, nurses, hospital administrators, ambulance services, fire and police departments, elected officials, consumers, and UAB representatives. It is interesting that UAB's involvement as a grantee from this project was so minimal the majority of the public in the Birmingham area did not know UAB had been involved.

In October 1973 a paramedic unit (medical/rescue vehicle) was established as a result of the EMS Demonstration Project in the fire departments of Birmingham, Homewood and Vestavia Hills. The Vestavia Hills unit also served Hoover via contract between the two cities. Paramedics were able to perform their lifesaving activities, e.g., endotracheal intubation, cardiac defibrillation, start I.V. fluids and give drugs by a special temporary approval from the State Committee of Public Health.

Two More Units

By 1974, one year later, the City of Birmingham had put two additional paramedic units into service. Two

years later Birmingham added three more paramedic units, giving a total of six units currently operating in the Birmingham Fire and Rescue Service Department. As you can tell, the name of the Fire Department was changed to accommodate a new activity within the departments.

From the excellent results with the EMS Demonstration Project in the Birmingham area in 1973 and 1974, which were comparable with the results in many other areas throughout the Nation providing advanced life support paramedic services, the State Emergency Medical Services Advisory Board proposed changes in the Rules, Regulations, and Standards under Act 1590 for the training and licensure of two additional advanced levels of EMTs: EMT-Intermediate and EMT-Paramedic.

These changes were approved by the State Committee on Public Health and became effective on Dec. 20, 1974. The State Board of Health stipulated initially that EMT Paramedic training could only be accomplished in a medical school environment to allow the students to gain as broad a spectrum of clinical experience as possible. Thus the areas designated for paramedic training were: University of Alabama in Birmingham, University of Alabama in Huntsville, The University of Alabama in Tuscaloosa, and The University of South Alabama in Mobile. Subsequent paramedic training sites have been approved by the State Committee on Public Health at the George C. Wallace Junior College in Dothan, and provisionally at Gadsden State Junior College in Gadsden. This has provided paramedic training sites in each of the six EMS regions throughout the State.

The MAST Program

In 1974 Governor Wallace provided \$250,000 of revenue sharing funds to the State Department of Public Health to assist in the development of the MAST program in our State. MAST stands for Military Assistance to Safety and Traffic, and is a joint effort of the U.S. Department of HEW, U.S. Department of Transportation and the U.S. Department of Defense. The

MAST sites serving Alabama are Fort Rucker near Dothan, and Fort Benning near Columbus, Georgia. This helicopter service has a 100 mile range and provides primary and secondary transportation for all types of patients with medical emergencies. Greater than 50% of all transfers have been critically ill newborn infants. A MAST Advisory Committee composed of both civilian and military representatives guide the activities of the MAST program.

Helicopters from Fort Rucker and Fort Benning cover most of the Southeastern portions of our State, and will fly patients into Mobile and Birmingham, even though they are beyond their 100 mile range, because of the medical resources available there.

This money was utilized to buy radios for these army helicopters so they could communicate with local public safety officials to coordinate landing of the helicopters, and also to communicate with the hospitals. Four transport isolettes for critically ill newborns were purchased for use in the helicopters. The rest of the funds was used to buy radios for the remaining hospitals in the State who already did not have radios in their emergency departments, so they could communicate with the helicopters and ambulances regarding incoming patients.

More Paramedic Training

Funding of Paramedic Training Programs Throughout the State—In 1976 Governor Wallace included money for paramedic training in the State Education Budget. This subsequently was approved by the State Legislature as part of the State Education Budget. This funding goes directly to the six paramedic training sites approved by the State Board of Health.

I.V. Fluids and Drug Supply/Resupply for Intermediate EMTs and EMT Paramedics—On the basis of a pilot program between University Hospital in Birmingham, State Board of Pharmacy and 10 fire department paramedic services in the Birmingham area during 1975 and 1976 a mechanism of providing intravenous fluids and drugs for EMT-Intermediates and EMT-Paramedics was developed. From the two

years of experience with this pilot program, additions to the Rules, Regulations, and Standards under Act 1590 were proposed and subsequently approved by the State Committee on Public Health in December 1976. To provide the quality control for the use of drugs and I.V. fluids outside the hospital, a paramedic service must receive his I.V. fluids outside the hospital, a paramedic service must receive his I.V. fluids and drugs from a hospital pharmacy. Also only one hospital pharmacy can service a paramedic service.

As a result of this change in the Rules, Regulations and Standards, we now have a standard drug list of 15 drugs and three types of I.V. fluids in a standardized dosage format to be used by all paramedics throughout the State. The relationship between pre-hospital emergency care services and hospitals is further strengthened by this linkage.

The whole State EMS plan has been designed, approved, and implemented with the complete involvement of the State Board of Health (Medical Association of the State of Alabama). Therefore, the entire EMS program has been monitored by the physicians of our State, and I believe this has been one of the key elements in our success.

Popular Services

The people in Alabama who now have paramedic services are very appreciative of these services and will not allow them to stop. This was seen several years ago when the Mayor of Montgomery tried to stop the paramedic service in the Montgomery Fire Department. The citizens in Montgomery literally stormed City Hall, and the paramedic services was reinstated.

Description of the State EMS Organization—The State EMS Division in the State Department of Public Health is the focal point for all EMS activities in our State. They provide an administrative staff to conduct the statutory requirements of Act 1590—which includes licensing and inspection of ambulance services, licensure and training of emergency medical technicians. They also contract with a physician for medical direction of the entire State EMS program. I have served as a Medical Director of the

State EMS Program under this contract for the past four years.

The State Board of Health has designated six EMS regions in the State which are coterminous with the Health System Agency (HSA) regions. The six regions are: North Alabama EMS, West Alabama EMS, East Alabama EMS, Birmingham Regional EMS System, Southeast Alabama EMS, and Southwest Alabama EMS. Each of these EMS regions has an administrative staff and a physician knowledgeable in EMS. The State Board of Health has officially approved the EMS physician in each of the six EMS regions, which have been recommended by each region respectively. This organization has worked extremely well. In particular, funding from DHEW from Section 12 of the Federal EMS Act of 1973 has flowed as a grant to the State Health Department, which in turn has been subcontracted with each region for various EMS activities. These have included EMS training, equipment for ambulance services rescue squads, hospitals and public education.

Summary

As a result of implementation of the Rules, Regulations and Standards under Act 1590, we now have State standards for training and licensure for the three levels of EMTs—Basic EMT, EMT-Intermediate, and EMT-Paramedic as well as a delineation of their specific functions; a State licensure mechanism for ambulance services; minimum requirements for ambulance vehicle configurations and the equipment on the ambulance including radios; requirements for invalid/convalescent vehicles; and a Statewide system for I.V. fluids and drug supply/resupply for EMT-Intermediates and EMT-Paramedics. This has resulted in the provision of emergency medical services, basic life support systems, in a majority of the regions in Alabama, and the spread of paramedic services, advanced life support emergency medical services, from the metropolitan areas into many rural areas of our State - e.g., Talladega, Tuscaloosa, Greensboro, Cullman, Gadsden, Prattville, Dothan.

Currently we have the following

CONTINUED ON PAGE 49

COMPATIBILITY



Does it influence your choice of a peripheral/cerebral vasodilator*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

VASODILAN[®]

(ISOXSUPRINE HCl)
20-mg tablets

Mead Johnson PHARMACEUTICAL DIVISION

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This asthmatic isn't worried about his next breath...

he's active
he's effectively
maintained on

QUIBRON[®]

Each capsule or tablespoon (15 ml) elixir contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg. Elixir: alcohol 15%

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.

Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.

Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e. clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 µg/ml.

How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100. Elixir in bottles of 1 pint and 1 gallon. See package insert for complete prescribing information.

Mead Johnson

PHARMACEUTICAL DIVISION

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The Uninformed Patient- An Unnecessary Risk

Physicians are being sued often and successfully. Yet a large percentage of these professional liability suits have no objective medical or legal merit. We at Jeppesen Sanderson believe comprehensive and documented patient education is an essential part of the solution to this phenomenon.

MED PREP or Medical Patient Risks Education Program was developed for this purpose. The planned MED PREP library of over 250 audiovisual presentations will cover 16 specialties. Each film describes a medical or surgical procedure along with a number of significant potential risks and, in most instances, some possible alternative courses of treatment.



The MED PREP information is presented in easy-to-understand language and in a warm and personal manner. After viewing the film and being given the accompanying briefing folder, the patient signs the folder's tear-off portion which then can become a part of the patient's permanent file.

MED PREP provides sensitive and perceptive patient briefings and documents that the information has been received. MED PREP is now available to Alabama physicians through the Medical Association of the State of Alabama. For more information about MED PREP and the benefits to patients and physicians, contact Dianne Juhan at 263-6441.

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Our communications experts specialize in particular fields of industry, teaming up to learn as much about each Alabama business as they know about business telecommunications. Whether your business is manufacturing, retail/wholesale food, petroleum, primary metals, medical professionals, or another industry... we're studying the problems unique to each.

Why? Because we realize communications problems are often the underlying cause of other problems in your business. By learning your industry well enough to understand

its operations and to identify its unique problems, we can design telecommunications solutions to help overcome them.

We may not yet know everything about your business, but we are concentrating our resources toward that goal. To get help with your business problems, call our problem-solver... your South Central Bell Account Executive.



South Central Bell

The system is the solution.



number of ambulances licensed in our State:
Total ambulances in state—315
Total licensed—254 (excludes AARS & Industry)
Commercial 139; Funeral Home 24; Licensed rescue squads 12; Public entity operated 89.
Unlicensed ambulances—51
Private industry 11; AARS 40.
The following number of EMTs are licensed in our State as of 3/31/78:
EMT Basic3,195
EMT Intermediate481
EMT Paramedic561
There are 30 fire departments pro-

viding paramedic services in our State. These firefighter paramedics have been called "fire-medics" by the public.
The number of EMS services currently approved by the State Board of Health for I.V. fluid and drug supply/resupply are:
I.V. Fluids Only 15
I.V. Fluids & Drugs 57
Total 72
Total Hospital Pharmacies
In The Program 37
The primary reason for the progressive spread of improvements in emergency medical services throughout Ala-

bama has been the involvement of physicians from the very beginning of the program, and at every level of the program as it has progressed. Every component in the progression of improvements in emergency medical services has been done with the full knowledge and consent of the State Board of Health.
Because of the State Board of Health is composed of the Medical Association of the State of Alabama, this essentially means the licensure of ambulance services and licensure and training of EMTs is approved by the physicians of our State.

You are aware, no doubt, that employers at all levels hesitate not hiring a woman for a particular job when they could easily fill the spot with a man who could do the task better. Our service academies now are forced to take women. These academies produce the officer corps for our armed forces and should turn out the most competent, masterful and versatile officers possible, who are adaptable to any or most circumstances.
Women officers are not as widely usable as men in the military, especially during wartime. Serious consideration is being given to placing women in combat, aboard ship and in fighter-type aircraft. Gym classes are now filled with both sexes. Some zealous HEW officials tried to prevent father-son and mother-daughter school activities and to our former president's credit he intervened. But think of the implications. It took the intervention of the president of the United States followed by a congressional amendment to Title IX, in order for fathers and sons and mothers and daughters to be able to experience these basic and good activities.
When laws are passed which prevent individuals having a sufficient freedom to find their best fit in the environment, we are in serious trouble. One way of life is based on individuality, personal freedom, and the freedom to find expression of one's abilities. Personal abilities are related to sex identity; there are fundamental differences between men and women. When the process of selectivity between the individual and society is seriously inter-

fered with by law, an eventual decline is the result, simply because people will be forced to fill positions which would be better filled by others.
Now we come to the Equal Rights Amendment. We have already seen how persons faced with the letter of the law, be it hiring of personnel or enforcement of the law, have over-interpreted and overreacted to the law. This overreaction is based on misreading the concept of equal opportunity for the sexes as meaning the sexes are equal. They are equal in value but they are qualitatively different. The United States Constitution has a far broader and more profound impact on the affairs within our society than specific laws. The Constitution provides guidelines which are subject to very wide interpretation by the Supreme Court. Even carefully worded laws and regulations are subject to widely divergent interpretations.
It is my deep concern and firm prediction that if the Equal Rights Amendment is ratified, within a short time every aspect of our way of life which is structured on sexual differences, be it physical or psychological, would be held to be unconstitutional. The common-sense preferences given to women, some of which are now backed by law, and to men will simply be wiped out as the resourceful and well-financed lawyers for the women's liberation movement litigate their cases up to the Supreme Court. Furthermore, as more and more individuals with psychological disturbances, sex role blurring in particular, become lawyers, judges, legislators,

and government and business executives, laws will be stretched by extremist regulations to propel us into a "gender-free" society.
Our lives will change enormously as those elements in life which are based on the differences between people and men and women are erased and as the heterosexual bond progressively weakens. A weak nation never lasts long. A stronger power will take us over, or forces within our own society will rise up and change our way of life forever. In either case, America as we have known it will be finished.
Fight Back
Individuals must fight back immediately and vigorously. The key link in the whole chain in the pivotal point around which all societies turn, namely, the family. Everyone must turn attention to the task of making it flourish. Then you must make your voice heard as individuals and as organizations or as coalitions of organizations. We must fight back against the social movements which are destructive to our way of life. We must preserve the vitality of our people and provide these vital and vigorous people a context, that is, a society in which it is possible to find the freedom to express their individuality.
This means, above all, preventing the passage of laws which ignore the differences between people, in particular the difference between a male and a female, and which undermine the security and stability of the family and the nation. Strong pioneer families created this country; strong families and strong leaders will save it.

Solving a claims problem is as easy as calling



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Or any of the nine other Blue Cross professional relations people throughout Alabama. Their job is to ease your pain when filing claims.

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PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

ALLERGY/PEDIATRIC ALLERGY: Age 42; Medical College of Georgia, 1967; American Board Certified; seeking multi-specialty group, single specialty group or academic. Available November 1979. LW-13442.

CARDIOLOGY: Age 30; Bowman Gray, 1974; seeking practice in Cardiology. Available July 1979. LW-09178.

FAMILY PRACTICE: Age 28; University of South Alabama, 1977; seeking group practice in a town with population of 30,000 to 50,000. Available October 1, 1978. LW-09278.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 29; Ohio State, 1974; National Board Certified; American Board Certified; American Board Eligible in 1979; seeking single specialty group, partnership or multi-specialty group. Available July 1979. LW-13592.

INTERNAL MEDICINE/GENERAL PRACTICE: Age 38; Howard University, 1966; American Board Eligible; seeking solo, multi-specialty group or emergency room. LW-12397.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03

INTERNAL MEDICINE: Age 32; Tulane, 1971; American Board Certified in 1974 in Internal Medicine; seeking practice in town of 25,000 to 50,000 population. Available at a negotiable time. LW-0500.

INTERNAL MEDICINE/PULMONARY DISEASES: Age 55; Southwestern Medical, 1948; American Board Certified in Internal Medicine; seeking practice in school health, institutionally based, or public health. Available April 1979. LW-11941.

MEDICAL STUDENT: Age 26; Universidad Central Del Este, Dominican Republic, 1982; seeking family practice in community willing to finance a medical student. LW-07178.

OPHTHALMOLOGY: Age 33; Vanderbilt, 1970; American Board Certified; seeking assistant or associate practice. Available September 1978. LW-201.

ORTHOPEDIC SURGEON: Age 31; Med. College of Georgia 1972; seeking practice in town of 50,000 plus population. Available August 1979. LW-701

OPHTHALMOLOGY: Age 30; St. Louis University, 1974; National Board Certified; American Board Eligible; seeking solo, part-

nership or research. Available January 1979. LW-12416.

ORTHOPEDIC SURGERY/HAND SURGERY: Age 32; Ohio State University, 1972; National Board Certified; American Board Eligible; seeking single specialty group or partnership. Available July 1979. LW-13012.

ORTHOPEDICS: Age 30; University of Alabama, 1973; National Board; seeking practice in the Northern section of Alabama in a town of 30,000 or more population. Available July 1979. LW-09378.

PATHOLOGY: Age 33; B. J. Medical College, 1968; American Board Certified; seeking practice in Pathology. Available October 1978. LW-09478.

PEDIATRICS: Age 45; University of Toronto, 1956; seeking assistant or associate, industrial or institutional practice. Available at a negotiable date. LW-300.

PSYCHIATRY: Age 28; University of Iowa, 1976; American Board Eligible in June

PHYSICIANS WANTED (Opportunities for Practice)

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

PHYSICIAN WANTED to take over busy practice in General Medicine in convenient location of Tuscaloosa. PW-05178

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate

1979; seeking practice in specialty or private practice. Available July 1979. LW-09578.

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400

SURGERY/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single specialty group or solo. Available July 1979. LW-12031.

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401

UROLOGY: Age 30; Yale Univ. 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800

UROLOGY: Age 31, New York Medical College, 1974; seeking practice in a group, partnership or solo. Available July 1, 1979. LW-07278.

working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles — population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,300 population; trade area less than 10,000; south central Alabama; one semi-retired physician in town; clinic available equipped for two physicians; commuter town; nearest hospitals 15 miles; nearest metro area 30 miles with 200,000 population; 5 churches, 4 schools. PW-09278.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.

**Brief Summary of
Prescribing Information**

Actions: Pyrvinium pamoate appears to exert its anthelmintic effect by preventing the parasite from using exogenous carbohydrates. The parasite's endogenous reserves are depleted, and it dies. Povan is not appreciably absorbed from the gastrointestinal tract.

Indication: Povan is indicated for the treatment of enterobiasis.

Warnings: No animal or human reproduction studies have been performed. Therefore, the use of this drug during pregnancy requires that the potential benefits be weighed against its possible hazards to the mother and fetus.

Precautions: To forestall undue concern and help avoid accidental staining, patients and parents should be advised of the staining properties of Povan. Care should be exercised not to spill the suspension because it will stain most materials. Tablets should be swallowed whole to avoid staining of teeth. Parents and patients should be informed that pyrvinium pamoate will color the stool a bright red. This is not harmful to the patient. If emesis occurs, the vomitus will probably be colored red and will stain most materials.

Adverse Reactions:

Nausea, vomiting, cramping, diarrhea, and hypersensitivity reactions (photosensitization and other allergic reactions) have been reported. The gastrointestinal reactions occur more often in older children and adults who have received large doses. Emesis is more frequently seen with Povan Suspension than with Povan Filmseals.

How Supplied: Each

Povan Filmseal® contains pyrvinium pamoate equivalent to 50 mg pyrvinium, supplied in bottles of 50 (NDC 0710-0747-50; NSN 6505-00-134-1966). Povan Suspension, a pleasant-tasting, strawberry-flavored preparation containing pyrvinium pamoate equivalent to 10 mg pyrvinium per milliliter, is supplied in 2-oz bottles (NDC 0071-1254-31; NSN 6505-00-890-1093).

RC/RD PD JA 1699 2 P (8 76)

When it's pinworms, treat the family



Povan® (pyrvinium pamoate)

- over 17 years of proved clinical effectiveness and safety
- no measurable absorption from the GI tract—minimal systemic side effects
- one dose—one time—that's all that's usually required
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Povan—there's a form for every member of the family.

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AUXILIARY

What In Health Do Our Schools Teach?

Mrs. Aubrey E. Terry
President, A-MASA

In 1917, the Legislature of the State of Alabama enacted a law requiring that physical education training be provided for all school students on a daily basis. Since that time we have observed some rather astounding changes resulting primarily from this requirement as we have gradually become more sports-minded in this state and nation.

Most every year many athletes become quite skilled in their performance and also without this law many children would not have the individual opportunity for learning self-discipline, fair play and team spirit that can be acquired through participation in physical education activities.

As fine as it is, this law contained no reference to health education. Through the years as school system grew they provided the required instruction in physical education while health education was limited in most cases.

In December 1975, the State Superintendent of Education, Dr. Wayne Teague, deciding that health education should be upgraded, appointed a Health Education Advisory Committee of eight members and charged them "to assist in analyzing the factors which both hinder and facilitate the provisions of health education in the public schools, and to assist in developing strategies to encourage school personnel to work toward the provision of comprehensive health instruction."

On June 17, 1976, the Alabama State Board of Education passed a

resolution in support of comprehensive health education, urging "that it be taught sequentially by qualified teachers in each school system under the authority of the State Department of Education."

Why teach health education in Alabama schools? Certainly education is one route through which people may best understand some of our social, economic and psychological problems relative to individual patterns of growth and development. It is through positive action based on this understanding that the quality of life can be improved.

There is a growing belief that future advances made in improving the nation's health will result primarily by initiating personal actions and reactions which will be influenced by an individuals health-related attitudes, values, beliefs and knowledge.

The school, through its education program, can provide students with information beneficial for encouraging them to develop better personal health attitudes and beliefs. This knowledge should then allow them to better assess their personal situation and make more practical and wiser health decisions. By addressing various problems at each grade level, schools may continuously upgrade and broaden the students understanding which should permit them to enjoy a lifetime of better health.

The Auxiliary, with the support and help of The Medical Association of the State of Alabama, has maintained for a number of years that teaching health

education is in the schools of Alabama has become more and more a necessity. With cohesive action of many, and hours of persistent and effective efforts by our Health Education Chairman, Mrs. O. B. Carr, Jr., the bill requiring Comprehensive Health Education teaching in the public schools became a law. It was passed by the Legislature of the State of Alabama at 11:45 p.m. April 13, 1978.

We have seen the impact of legislation enacted in 1917 requiring the teaching of Physical Education in our public schools. Hopefully in the long run this new law will produce an even greater and more beneficial effect for our citizenry, and hopefully each individual who becomes a participant in this program will receive the anticipated rewards which we expect by becoming more knowledgeable at an earlier age by acquiring health oriented training.

With the basic groundwork laid, we now face the reality of implementing the teaching of Comprehensive Health Education in our schools as a requirement for graduation beginning with 10th grade students in 1982-1983.

This is a large challenge to each of us as we assist the Alabama State Department of Education in developing this program.

Hettie

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MEDICAL OFFICE for lease in Tuscaloosa, with or without equipment. Building is 1½ years old, 1650 square feet, four examination rooms, large reception room; one unit of four-office complex; two medical offices, two dental offices. Fully equipped, if desired, for instant practice; equipment purchase optional. Ten blocks from Druid City Hospital. Separate equipment sale negotiable. Inventory available. Contact: Paul D. Nelson, D.M.D., 601-A Hargrove Road East, Tuscaloosa. Phone (205) 345-7134.

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PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write: Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7545, evening hours 553-2198.

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- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarthritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has no significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

JOURNAL

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OCTOBER 1978

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The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma. May be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication. Abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Use in Pregnancy: Use of minor tranquilizers during first trimester should always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other an-tidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over-sedation.

Side Effects: Drowsiness, confusion, diplopia,

hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.



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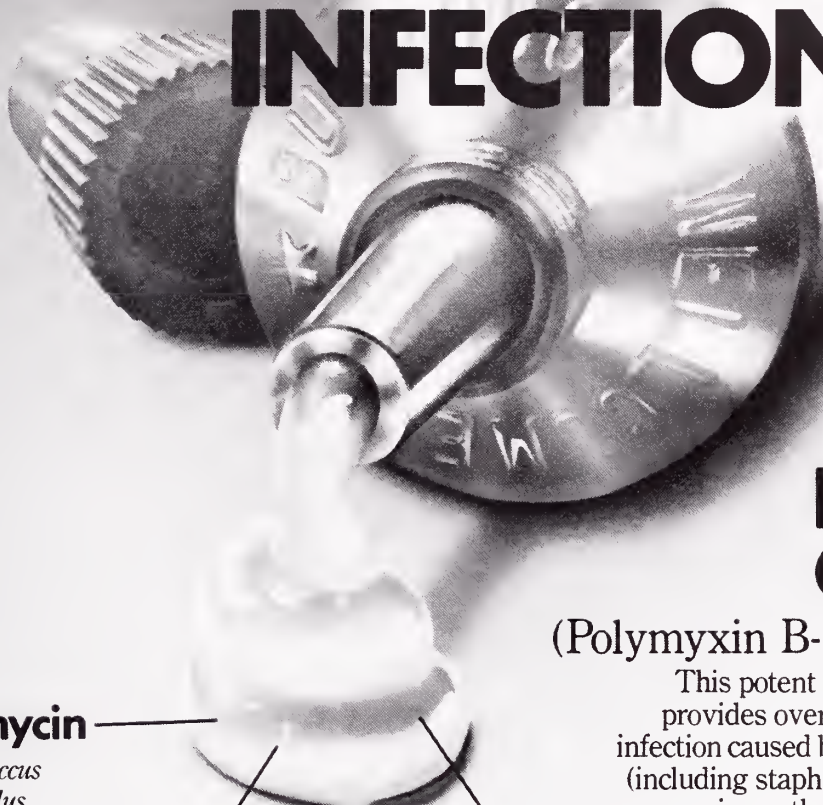
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WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is

affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Information For Authors Concerning Manuscripts

Manuscripts should be typewritten, double spaced on white paper 8½x11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

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The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct, drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

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FROM THE EXECUTIVE DIRECTOR

ELEMENTS OF THE TEAM

The close association between MASA and Mutual Assurance Society of Alabama is surely well known by Alabama physicians. But some of them may not be fully aware of the extent of this enduring relationship in day-to-day cooperation in matters of vital interest to doctors.

MASA and MAS complement each other. Their individual strengths combine to produce a professional team effort in approaching the myriad problems that confront Alabama medicine in this most difficult period in the Association's history.

MASA, being a non-profit corporation, is prohibited by law from certain activities. Mutual Assurance can fill these gaps, providing Alabama physicians with the best attainable protection against the hostile environment of today's world.

And, how incomplete both would be, as close as our cooperation is, without that essential third member of the Alabama medical team, ALAPAC, which can do under the law what neither of the other two can.

To paraphrase the philosopher: "If Mutual Assurance did not exist, it would be necessary to invent it." Necessary, because MAS provides not only the malpractice coverage so vital, but it pinpoints the vulnerable spots within the physician's community.

Working together, MASA, MAS and ALAPAC can provide the foundation for necessary legislative reform, loss prevention, risk management and quality control. They can also insure the self-discipline of the profession that is so fundamental to the survival of the free practice of medicine.

If Mutual Assurance was born of necessity, and it was, it lives on and will continue to live performing vital services to Alabama physicians that are simply unavailable to them through other offices.

If I called this a triumvirate, that would be imprecise, because that implies rule by three. By the very nature of the democratic organizations of each of these Alabama medical defenders, they are themselves ruled by the membership, through explicit application of the oldest principal of the American way—consent of the governed.

That is what MASA is all about, and MAS and ALAPAC.



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This asthmatic isn't worried about his next breath...

**he's active
he's effectively
maintained on**

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Each capsule or tablespoon (15 ml) elixir contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg. Elixir: alcohol 15%

- theophylline for effective around-the-clock bronchodilator therapy
- 100% free theophylline

Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.

Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.

Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e. clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 µg/ml.

How Supplied: Capsules in bottles of 100 and 1000 and unit-dose packs of 100; Elixir in bottles of 1 pint and 1 gallon. See package insert for complete prescribing information.

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Vote November 7th

Hiliary H. Henderson, Jr., M.D.
President



The right to vote is so essential to our form of government I would not presume to lecture you on that subject. Nor would I presume to tell you for whom to vote in the general election coming up Nov. 7th. I certainly trust your judgment to exercise this most precious of all individual liberties in a free society.

However, I think I have every right, as your fellow physician and as your President, to urge you to exercise that right. For if you fail to take the few minutes it will require to make your opinion known, and counted, you will have failed in an obligation to yourself, your colleagues, the citizens who look to you for leadership, and to your profession.

I need hardly tell you that medicine in America is at the political crossroads, with the years just ahead the most critical that doctors in this country have ever known. All the bluster and all the storm clouds we have seen so far are just a forecast of what is to come—on local, state and national levels, according to the best judgment of medical leaders across the country.

By head count alone, physicians are a very small minority in the state and the nation. But politicians regard us as very important, out of all proportion to our numbers, because we are considered opinion-makers near the top of all professional groups by those who make politics their bread and butter. Other professionals so regarded are bankers, leading attorneys, outstanding ministers, etc.

But political experts say that a well-informed physician—because he is looked to for leadership in his community and because he is in such close contact with so many patients, who are in turn in contact with relatives and friends—is considered vital to any political movement.

In other words, the politicians take us very seriously. It seems plain to me that we should start thinking of *ourselves* as seriously as the political candidates think of us.

And how can we do that, if we don't discuss the issues of the day with other opinion-makers and with anyone who asks our opinion? I am not saying you should take the stump and get involved in partisan campaigns unless that is your inclination. I am saying that you should be every bit as honest about your political convictions, whatever they are, as other community leaders are.

And you should vote in *every* election.

If you haven't been doing that before now, what better beginning than the general election? Here in the Deep South, ruled by one-party politics for so many years, the general election has been a joke, until recently.

It has been ignored by everyone so long, except in presidential election years, any effort to make our political system really competitive has failed. Those who wanted to offer themselves as alternative voices have been discouraged from trying because no one seemed to care.

We should care and we should let it be known that we care. I am not urging you to vote for one party or another, any more than I would think of telling you which candidate to support. All I am saying is VOTE.

By your interest, by your presence at the polls Nov. 7, when there will be far few voters than in the September primaries, you will show that you care and that all physicians care.

And I can't think of any better time in our professional history than now to demonstrate that.

Hiliary H. Henderson Jr.

Table 1

SPMC GRADUATES 1976 - 1978

Primary Care Disciplines		Other Disciplines	
Family Practice	16	Anesthesiology	1
Internal Medicine	8	Flexible	10
Obstetrics/Gynecology	2	Categorical Medicine	1
Pediatrics	3	Ophthalmology	1
		Orthopedics	1
		Orthopedic Surgery	1
		Pathology	1
		Psychiatry	3
		Radiology	2
		Surgery	3
TOTAL	29	TOTAL	24

Dean's Report:

Five Year
Summary

by SILAS GRANT, M.D.
Associate Dean, School of
Primary Medical Care,
The University of
Alabama in Huntsville

Five years ago this fall the School of Primary Medical Care of The University of Alabama in Huntsville received its first medical students. True, there were just five of them and they were coming to Huntsville from Birmingham for short-term electives only; nonetheless, the School of Primary Medical Care was a year ahead of schedule in having any medical students at all.

Furthermore, they were the first medical students that UAH and North Alabama could call its own, even for a month or two. Excitement rippled for days ahead through the two trailers on the UAH campus that at that time housed all of the School of Primary Medical Care except the Family Practice Center.

Approving murmurs about "white coats" echoed (with suitable academic restraint) through conveniently open office doors in Madison Hall, the main UAH administration building, as the Five assembled in the President's Conference Room on a sunny October morning to be welcomed and briefed.

The momentum has been strong. We have seldom paused and looked back at that October day in 1973. With a sudden sense of accumulating a history we note that one of those hardy five students, having duly graduated from the University of Alabama School of Medicine, has gone on to complete the three-year UAH Huntsville Hospital Family Practice Residency Program and has been practicing since July in Scottsboro, where he took his family medicine elective five years ago. As

this report is in process, we are welcoming the second permanent Dean, Dr. Colin Campbell, who, we realize with a jolt, has no first-hand acquaintance with that memorable October morning nor with any of the five years in between.

Taking Stock

It's not a bad thing at this point to do some stock-taking, for the new Dean and for those of us who have been on hand since the school began operation. A total of 53 students who have graduated from the University of Alabama School of Medicine classes of 1976, 1977, and 1978 have received their clinical training (last two years of medical school) at the UAH School of Primary Medical Care.

Numerous others have done core rotations or clinical electives as guest students in Huntsville. The two-year clinical program at this school is intended to prepare students to enter approved residencies in any discipline recognized by the AMA Council on Medical Education. All of the 53 students who have completed this program have been placed in residencies, 48 (91%) in one of their choices of residency programs.

One of the goals of the SPMC undergraduate medical education program is to demonstrate the primary care disciplines as viable career options. To date, 29 of the 53 students who have completed the SPMC clinical education program are in residencies usually classified as primary care. (*See table 1.*)

Of the remaining 24 graduates, the majority of the 10 who are in flexible residencies have indicated a preference for primary care specialties. The other 14 graduates are in residencies in more traditional disciplines (anesthesiology, categorical medicine, ophthalmology, orthopedics and orthopedic surgery, pathology, psychiatry, radiology, surgery).

Six of the School of Primary Medical Care graduates now in family practice residency programs are among the 34 residents currently enrolled in the UAH-Huntsville Hospital Family Practice Residency. The Huntsville program was the first approved family practice residency in Alabama and the first to graduate residents. Most of those residents from the program as of June 30 of this year are practicing in the region. (Table 2.)

Of the 12 graduate and former residents practicing in Alabama, 8 were originally from Alabama and seven of the eight received their M.D. degrees from the University of Alabama School of Medicine. Two more resident graduates who received their M.D. degrees from the University of Alabama School of Medicine are practicing elsewhere, one in Tennessee and one as a medical missionary in Colombia, South America.

Considering the need for family doctors is even greater there, we take pride in helping the meet that need. Our five remaining resident graduates who are practicing out of state are all back in their home states — two in Tennessee, one in Mississippi, and two in Kentucky.

Table 3 shows the type of practice and the size of the community for our 16 graduate residents who are in Alabama and nearby states. As indicated, 12 are practicing in towns with populations of 30,000 or less, none in cities of 30,000 to 100,000 people, and four in cities with population over 100,000. Those practicing in towns of less than 30,000 usually serve a patient population extending geographically well beyond the town where the practice is located. It is worth noting that one of our residents who is in a group practice in a town of less than 30,000 (Red Bay, Alabama) is a Texan who has gone into practice with his former

preceptors in the two-month rural preceptorship in North Alabama that is required of all our third-year residents.

Farflung Faculty

The two physicians in Red Bay who serve as preceptors in the Family Practice residency program are just two of nearly 150 physicians and health care professionals across North Alabama who serve as Clinical Faculty for the School of Primary Medical Care on a volunteer basis. Many of these physicians have been assisting in developing and teaching the student and resident curricula for five years or more. The school's full-time and part-time faculty appointments now total 53; distributed as follows: Community

Medicine, 7; Dermatology, 1; Family Medicine, 10; Internal Medicine, 5; Medical Sociology, 1; Obstetrics and Gynecology, 4; Pathology, 2; Pediatrics, 11; Psychiatry, 4; Radiology, 1; Surgery, 7.

The School's faculty, administration and support staff are now based in two adjoining buildings, the UAH Ambulatory Care Center and the new UAH Clinical Science Center, across the street from Huntsville Hospital in Huntsville's Medical District. The Ambulatory Care Center continues to serve as the school's main educational and patient care facility and as headquarters for the UAH-Huntsville Hospital Family Practice Residency Program.

The Clinical Science Center serves as

Table 2

PRACTICE LOCATIONS (17 GRADUATE AND 2 FORMER RESIDENTS)

ALABAMA	TENNESSEE	MISSISSIPPI	KENTUCKY
Alabaster 2	Fayetteville 1	Quitman 1	Columbia 1
Gadsden 1	Oak Ridge 2		Richmond 1
Huntsville 4			
Madison 1			
Moulton 1			
Red Bay 1			
Scottsboro 2			
12	3	1	2
Sub-total			18
Colombia, South America			1
Total			19

Table 3

COMMUNITY AND PRACTICE SIZES (16 Graduate Residents Practicing in this Region)

Community	Practice			
	Solo	FP Group	Federal Medicine	E.R.
Under 30,000	2	8		2
30,000 - 100,000				
Over 100,000	1	1	1	1
Total				16

Dean's Report

the school's medical student headquarters, with the office of medical student affairs, student recreation and study areas, and a large lecture hall all conveniently located on the ground floor. Near the student areas is a 6,000 square-foot Health Sciences Library, which had already established itself as a community resource for physicians and other health professionals when it was in much smaller temporary quarters in the Ambulatory Care Center.

The second floor of the new building houses administration and faculty offices and laboratories; we will now be able for the first time to conduct biomedical research in-house. The first research projects in the new labs will be conducted by the faculty in surgery and pediatrics. The surgery laboratory will be used for tumor research, enzyme evaluation, and continued work on the arterial venous shunt. The pediatrics faculty will be working in immunology and diagnostic virology. This will be the only human virus lab in the area.

Story of Progress

We've come a long way since the two trailers on the UAH campus and the first location of the Family Practice Center in a small rented building. Whatever we have achieved of lasting worth would not have been possible without the extraordinary dedication, competence, and generosity of a great many people in Huntsville and throughout North Alabama.

Foremost among this group have been our supporters from UAH and the University of Alabama System Medical Education Program Administration. The list would include many others — our hard-working volunteer faculty and a host of other physicians, administrators and staffs of hospitals and service agencies, and individuals and groups in other professional areas who have given time, money, and moral support to the programs of this school.

With their help, the UAH School of Primary Medical Care will continue to supply more physicians and services for Alabama. □

BRIEF SUMMARY OF PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate)

ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

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When you're good people recognize you.

Highly effective
Single-dose convenience
Non-staining
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Pleasant tasting

Antiminth[®]
(pyrantel pamoate)

equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION

Please see brief summary of prescribing information on facing page.



a drug of choice in
pinworm infections

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**When painful spasm
is the presenting
symptom...**



... in functional G.I. disorders*

Bentyl[®]

(dicyclomine hydrochloride USP)

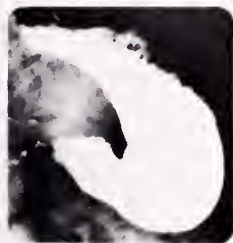
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity
with minimal anticholinergic side effects[†]

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection
AVAILABLE ONLY ON PRESCRIPTION.

Brief Summary
INDICATIONS

For use as adjunctive therapy in the treatment of peptic ulcer. IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHLINERGICS/ANTISPASMOICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHLINERGIC/ANTISPASMOIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders), and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon)

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with autonomic neuropathy, hepatic or renal disease, ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon, hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension, hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention; blurred vision and tachycardia, palpitations; mydriasis; cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION** Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg capsule and syrup Adults 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children 1 capsule or teaspoonful syrup three or four times daily. Infants ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg Adults 1 tablet three or four times daily. Bentyl Injection Adults 2 ml (20 mg) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1976

LETTERS

Califano's Arrogance

Editor, The Journal:

Health, Education and Welfare Secretary Califano's "anti-inflation" measures, outlined to a Washington news conference recently, constitute the most flagrant abuse of citizens by a cabinet officer in the history of the United States.

His aim to "cap" hospital revenue increases at 9% a year is unrealistic because of the inflationary fires of federal spending. His claim: "It would save the nation \$56 billion within five years."

Mr. Califano's crystal ball is a bit opaque, considering that HEW has lost track of \$7 or \$8 billion inside its own machinery in the past year. What is more sure, is that getting rid of the machinations of the Carter Administration would result in a quarter-trillion-dollar saving to the nation in *one* year!

Since when has a cabinet officer dictated prices for medical equipment and laboratory tests? Since when has a cabinet officer, a non-physician, made such medical judgments as computer screening to "flag" unnecessary health services? Since when has a non-physician set the length of hospital stays and specified medical testing? Since when has a cabinet officer dared dictate who should have a second opinion on contemplated surgery? Should not the patient at least be consulted?

Since when has a cabinet officer so meddled with government contracts? (i.e., for Medicare-Medicaid "to make them more competitive," as if only Califano can decide what is "competitive!") Since when has a cabinet officer dictated to the states how much notice they must give before increasing Medicaid fees?

And since when has a cabinet officer tried to influence the States' Governors to promote the substitution of cheap drugs, and coerce state employees and medicaid beneficiaries to enroll in Health Maintenance Organizations?

These are ostensibly but not actually cheaper than conventional health services, not to mention antithetic to individual medical practitioners.

Since when has a cabinet officer threatened private citizens with federal controls, i.e., doctors who do not bend to Califano's idea of "cost cutting"? Since when does a cabinet officer demand that doctors maintain a registry of fees and services, and exhibit a "willingness" to accept patient loads and medicare-Medicaid patients at the behest of the Secretary of HEW?

Aside from the merits or demerits of accepting any patients, should not doctors have free choice of those they wish to care for? Or are they to accede to the demands of this draconian cabinet officer?

Not since the Star Chamber Courts of the Tudor kings has a cabinet officer dared to exert his will on supposedly free members of a profession. One can just see the reaction

CONTINUED ON PAGE 16

WRITE: LETTERS TO THE EDITOR, THE JOURNAL, P.O. BOX 1900-C, MONTGOMERY, ALABAMA 36104.

Merrell

MERRELL NATIONAL LABORATORIES
Division of Richardson Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Diabetes In History

Another great moment in the history of diabetes has arrived. The development of the production of "human" insulin by microorganisms and the opening of the Diabetes Research and Training Center, UAB Medical Center, Birmingham, constitute the first giant step forward since Banting and Best.

These two events will surely mark 1978 in medical history.

History is of value only when put to use. Progress or downfall results from heeding or ignoring the lessons of history. Esau of the Old Testament has been diagnosed as a sufferer of hypoglycemia. About 1500 B.C. in Egypt polyuria was described. The Ebers Papyrus of that period have been translated: "urine which runs too often."

In the First Century A.D., Aretaeus, the Cappadocian, wrote: "Diabetes is a wonderful affection -- being a melting down of the flesh into urine." The disease got its name from a greek word meaning a syphon. Galen referred to diabetes by that name and also called it dropsy of the chamber pot. It was William Cullen, founder of the Medical School at Glasgow, Scotland, who added the adjective mellitus to it.

The ancient Greek physicians recognized diabetes. They offered diabetic urine to ants and recognized the sugar in the urine. They treated diabetes by limiting food intake. Charaka wrote 2,000 years ago: "...the urine in this variety looks like the expressed juice of the sugar cane."

The ancient physicians wrote that diabetes was prevalent in Egypt and the Middle East but not seen in Spain and the colder countries to the north.

All this knowledge (history) was lost during the dark ages. It was in the mid Seventeenth Century that Sir Thomas Willis (more famous for his discovery of the Circle of Willis) publicized the sweetish taste of diabetic urine. At about the same time, Richard Morton, an English physician, concurred in the sweet taste of diabetic urine and also pointed out the role of heredity in diabetes. Pearls lost for 2,000 years had been rediscovered.

During this same century, J. C. Brunner, a Swiss, began experiments on the pancreas. Brunner removed the pancreas glands from dogs and reported that they developed extreme thirst and polyuria.

During the 1800s, W. Prout first described diabetic coma. Addison first described xanthoma diabeticorum. Richard Bright wrote his accounts of pancreatic diabetes and pancreatic steatorrhea. Paul Langerhans discovered and described the islets of Langerhans, so named for him 24 years later by the French histologist, Gaguesse.

Appollinaire Bouchardat (1806-1886) deserves special comment. He was, according to Joslin, the first clinician to offer hope to diabetics. He devised tests for glucosuria, invented gluten bread, and advised treatment by diet. There was some arresting of the ravages of diabetics so that some lived long enough to die of something else.

Over the years, knowledge gained in anatomy, histology, chemistry and physiology led to plodding progress toward more sensational discoveries. The contributors are many. The prizes and acclaims given them are numerous and well deserved.

The first giant step, like the first rocket to the moon, came in 1921. The famous co-workers, Banting and Best, discovered and isolated insulin. This is but yesterday in the long search. Now in 1978 a second giant step has begun.

But, questions always remain. Has the availability of insulin, and improved therapeutics in general, led to the startling increase in the incidence of diabetes mellitus? Is it really approaching epidemic in occurrence in the adult population? Will all Americans have the hereditary predisposition to this defect in metabolism by the year 2000? Has the relative deficiency of indigenous insulin really anything to do with the etiology? Is a virus involved? What role does the autoimmune system play?

Questions, questions. Some now pondering them will surely live to see answers. They will learn the lessons of history. And others, yet unborn, will reap the benefits and themselves continue worthy contributions to history.



WM. L. SMITH, M.D.
Editor-in-Chief
The Journal of MASA

A handwritten signature in dark ink, appearing to read "Wm. L. Smith".

CONTINUED FROM PAGE 14

of lawyers if Mr. Califano demanded their fee schedules as well as their panel servitude to legal representation of whatever litigants were judged fit by the Attorney General.

Mr. Califano has gone far beyond the bounds of constitutionality in these matters. He is clearly threatening physicians with total loss of due process if they resist the measures he is foisting on them.

Moreover, the man is insatiable in his demands. Witness his criticism of three of the organizations who have been most willing to cooperate with federal controls, namely, The American Medical Association, The American Hospital Association, and the Federation of American Hospitals. Says Califano:

"It doesn't look to me as if there is much voluntary restraint." (i.e., to hold down costs.) And, "The hospital industry wants to raise prices at will."

It should be clear to organized medicine and its ancillary "industries" (I could tear the word), that Califano is and will be no more moved to satiety than was Hitler when it came to the Jewish question. Yet these abject people, in the hope that Califano will eat them last, will persist in cooperating with him.

Wasn't it Jean Paul Sartre who said:

"I hate victims who respect their executioners?"

O. G. Burkart, M.D.
Auburn, Alabama

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Librax®

Each capsule contains 5 mg
chlordiazepoxide HCl and 2.5 mg clidinium Br

Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma, prostatic hypertrophy, benign bladder neck obstruction, hypersensitivity to chlordiazepoxide HCl and/or clidinium Br

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage, withdrawal symptoms (including convulsions) reported following discontinuation of the drug

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.

As with all anticholinergics, inhibition of lactation may occur

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially, increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants, causal relationship not established

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated, avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction, changes in EEG patterns may appear during and after treatment, blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets

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Juvenile-Onset Diabetes

"Rhonda was nine when it was discovered that she had the disease...had it been before 1921 and the isolation of insulin, her prognosis would have been dim indeed... now, the future holds even greater promise for the Rhondas who will come after her..."



A Classic Study In Alabama

By WILLIAM H. McDONALD

Rhonda Vines, 16, pictured on this month's cover, has lived with juvenile onset diabetes more than half her life.

She was 9 when it was discovered she had the disease. Before the isolation of insulin in 1921-22 by Canadians Frederick G. Banting and Charles H. Best, her prognosis would have been dim indeed.

But the future holds even greater promise for the Rhondas who will come after her—even though, some scientists say, by the year 2000 virtually the entire United States population will have the genetic predisposition for diabetes.

That would be an alarming projection were it not for the fact that intervention by science seems more probable now than ever.

One researcher is in the multidisciplinary team at the Diabetes Re-

search and Training Center, at the Birmingham Medical Center, predicted that a determination of the cause of juvenile onset diabetes (JOD) and prevention would come well before there is a cure.

That is likely, he said, because of the mass of research that has just come to focus from several directions on the disease. It is almost certainly of viral etiology, in combination with a genetic predisposition now being better understood in studies, already in progress at the Diabetes Center, on an exciting new frontier called HLA, for human leukocyte antigens.

Genetic Markers At Birth

It is something stronger than an hypothesis now that HLA predeterminations at the molecular level may

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A Classic Study CONTINUED FROM PAGE 19

control, at birth, an individual's vulnerability to certain diseases, including diabetes.

JOD comes on suddenly in most cases, like other classic diseases of childhood. It is believed now that genetic coding, in consort with some environmental agent, such as a virus, and perhaps other factors as well, may be accountable for the disease. Suspicion is not limited to mumps as one of the triggering viruses, a circumstantial association noted by pediatricians for years.

Tantalized by the proliferation of new information on JOD, scientists of all disciplines have thrown themselves into an all-out attack on the disease from many fronts. Involved are virologists, endocrinologists, epidemiologists, microbiologists, and virtually every other discipline.

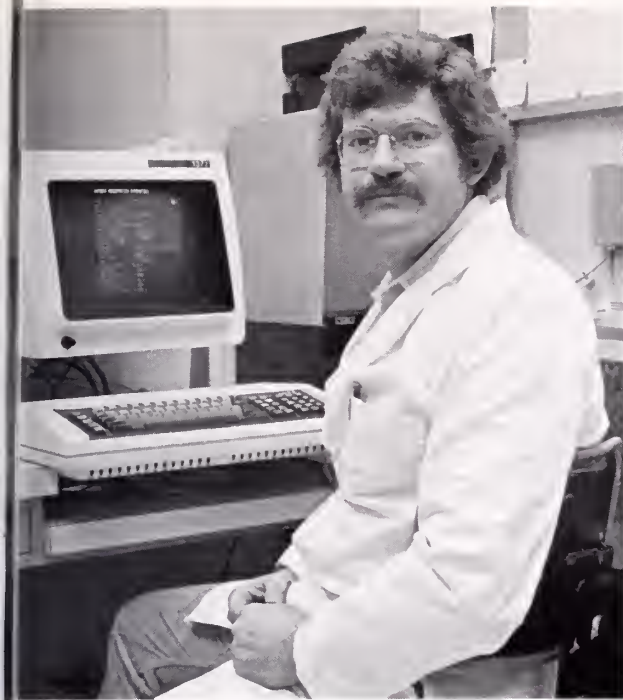
Where once medical science had been fatalistic about diabetes, assigning it the label of a "chronic" disease, this view has been exploded in very recent years.

In the 1950s, for the first time in the history of the planet, infectious diseases ceased to be the major cause of death worldwide. The so-called "chronic" diseases then became the major cause of death in the developed nations (although infectious diseases are still dominant in undeveloped parts of the world).

This global mortality occurrence



[4]



1] The eight-story Diabetes Research Center, 7th Avenue and 18th Street, in the heart of the UAB Medical Center. It is the only facility of its kind in the country. 2] Buris R. Boshell, D.V.M., M.D., was a full professor at age 37 when he decided he wanted something different in life—"a benign dictatorship" in research that would succeed or fail on his efforts. The Diabetes Center is the result. 3] Jeffrey M. Roseman, M.D., Ph.D., M.P.H., is an epidemiologist charged with keeping the JOD registry and translating out to physicians across the state the latest information on diabetes. 4] Ronald T. Acton, Ph.D., is a Birmingham-born scientist who heads the Diabetes Research and Training Center's multidisciplinary research programs. Dr. Acton's background includes specialty study at Oxford. He is also a consultant to the U.S. space program.

gave science a breathing spell. Attention inevitably turned to the chronic diseases, including diabetes in both its major forms — juvenile onset and maturity onset. (A heated controversy is now raging over categorization, some preferring such terms as insulin-dependent, non-insulin-dependent; obese, non-obese; ketosis-prone, non-ketosis-prone; and so on. As much semantics as science may be involved in some of this.)

Third Leading Cause of Death

Diabetes was particularly intriguing, and urgent, because it was soon discovered that, instead of being the 5th leading cause of death, it was the 3rd, behind cancer. People had been dying of cardiovascular disease, kidney disease, etc. when diabetes was the underlying cause. New methods of reporting revealed this to be true.

Also, cancer was the second leading cause of blindness, a major reason for amputations, etc.

Insulin, as great as was the contribution of Banting and Best, is not a cure. It lessens complications and prolongs life, but complications down the way remain severe. The child with JOD still has an average of 14 years subtracted from his life, and many other deductions from the quality of life.

Insulin is, in short, no final solution, some say. Many scientists, encouraged by the wealth of new information on

JOD, are persuaded that prevention will come before a cure, conceivably by a vaccine. Maturity onset diabetes has certainly not been forgotten, but the present encouragement is directed toward JOD, now believed to be raging in epidemic proportions like polio in its worst years.

One recognized reason for this, and the basis for the projection that the entire population will be genetically predisposed to JOD by the end of the century, is an unsuspected penalty of insulin.

Although the work of Banting and Best has been a life-saver for thousands of children, JOD was thought to be passing from the scene in the 1920s. Insulin prolonged the lives of those who contracted JOD, enabling them to live through the reproductive years. They became parents instead of dying out, passing their genetic predisposition on to their offspring, making them, in turn, vulnerable to whatever environmental factors, including viruses, must coexist to produce JOD.

The exponential growth in the basic sciences in the 50s, 60s and, now in the 70s, also contributed to the suddenly swelling knowledge about JOD and other diseases heretofore considered "chronic."

It may have been little more than coincidence that, in the middle of this growth period, the Diabetes Trust

Fund was founded in Birmingham. Looking back these 13 years later—with the magnificently appointed and equipped eight-story Center a going concern, the only facility of its kind in the country—it had to have been more than that.

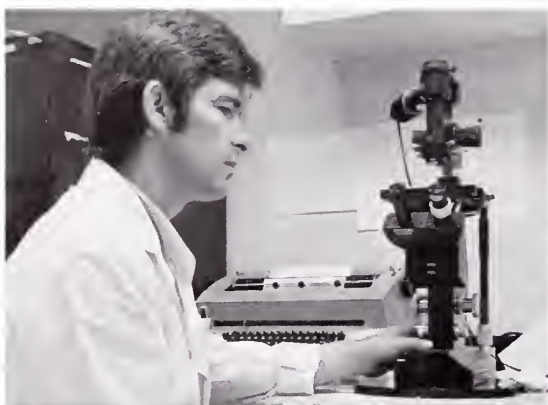
Blind Alley at 37

The man responsible for the Center is Buris R. Bushell, M.D. He got interested, he now freely admits, because he thought his professional life as a professor at UAB had entered a blind alley at age 37, in the 1960s.

He was tired of Veterans Administration red tape as chief of medical services at the Birmingham VA, and not at all ecstatic about the prospects for academic advancement as a medical professor. He didn't love administration, he decided, and would never have been happy as a dean or department chairman.

He had graduated from Auburn with a B.S. in agriculture in 1947, received his D.V.M. two years later when a venerable vocational agriculture professor told him to consider medicine. He did and won his M.D. from Harvard in 1953 after transferring from UAB. He interned and did his residency at Peter Brent Brigham Hospital, Boston, where he was assistant director of the diabetes teaching unit. He started out in cardiology but was sidetracked in diabetes. →

[1]



[2]

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A Classic Study

With all this behind him, he resigned his full professorship at UAB and took a sabbatical, 1968-69, to examine what he wanted to do with his life.

"I wanted to have a place small enough where success depended on my ability to make it happen. In a sense, I wanted a benign dictatorship," he said recently in his office at the Diabetes Center.

Whether that is the way he runs the Center as Medical Director is arguable, but back there in the 1960s he set about achieving his goal. What has become the Diabetes Trust Fund was then a small but highly motivated group.

The success story is well known, and the unique Diabetes Research and Training Center is its enduring monument, funded now by various grants, including state, and soon perhaps to be designated one of the 15 national diabetes research and training centers, under the National Diabetes Mellitus Research and Education Act of 1974 (PL-93-354).

Key Associates

The first five floors were opened in 1974, with the three additional floors completed more recently. The sixth floor is shelled in.

There is nothing comparable in this country — a free-standing unit containing all phases of research and treatment of one of the remaining scourges.

Serving under Dr. Bushell are three key Associate Directors: Ronald T. Acton, Ph.D., Research; Jeffrey M. Roseman, M.D., Ph.D., M.P.H., Translation; Rex S. Clements, Jr., M.D., Clinical Programs.

All the physicians and scientists are assembled in a grand design deliberately intended to promote cross-fertilization. On any given day, a clinician may

1] Bruce Barger, Ph.D., heads the HLA lab where phenotypic characterizations of patients' blood cells are made. He is reading plates, punching in the information on cards. The plates themselves become permanent records. 2] Linda Baker, here dispensing the agent for HLA typing, has more than a professional interest in her job. She is a JOD patient. 3] The work of Caroline S. Pace, Ph.D., is so sensitive, a copper screen bird cage around her instruments shields them against spurious radiations from radio stations, etc. She is measuring, in millivolts, the electrical currents across the Beta cell membrane under stimulation with glucose.

be seen conferring with a virologist, microbiologist, biochemist, geneticist, or pathologist on some new idea or old problem.

"Translating" all this—preparing it for the Alabama physician wherever he is—will be the increasingly important job of Dr. Roseman, 33.

Born at Eglin Field, Fla., where his psychologist father was stationed in 1945, Dr. Roseman received his B.S. in biology from Antioch College, his Ph.D. in cellular immunology from the University of Chicago, his M.D. from the Pritzker School of Medicine, Chicago, and his M.P.H. from the University of North Carolina, Chapel Hill. He also held post-doctoral fellowships in aging and immunology & allergy at Duke University.

Dr. Roseman is also charged with the responsibility of managing the JOD registry. Now that JOD has been declared a reportable disease by the State Committee of Public Health, physicians are urged to cooperate in what may well be a historic medical inquiry, longitudinal in concept.

From the reporting of JOD, Dr. Roseman expects to see the first substantial data ever collected in this country on geographic clustering (there is some suspicion of this already); temporal clustering (fall and winter are high incident seasons); and the viral relationship, if it exists.

Prompt Reporting

For the last reason, principally, he must have prompt reporting, so his evaluation teams can run their tests when viral agents are still detectable. Dr. Roseman is aware of the physician's problems with too many forms already:

"We know there is resistance. I am a physician and I know. It's another

piece of bureaucracy, another form I have to fill out.

"But this is not going to be any kind of bureaucratic tool. And it's different in another way as well. We are going to try to give the physicians something for the information they give us. The information will not be wasted. We have a whole big research program that is going to be directed at that information.

"The registry is going to help them better manage their patients. We will tell them other members of the family that should be watched. It doesn't really help you treat flu, for instance, to know about that epidemic, but this is different.

"The tests we will be doing are not the routine tests that physicians would be doing. We will be giving them information they could not otherwise get.

"All information compiled by us will be returned to the physician. My job is to translate all of our information out to people taking care of patients. We will offer new procedures that will aid in diagnosis and improve prognosis.

"We won't be doing any treatment in this clinic—just the evaluation. If the physician *wants* some help with treatment, of course we'll be happy to provide that, but we're not taking the patient away from the physician.

"All the information gotten from this clinic will be returned to the physician."

Alabama is ideally suited to this study, which could well become the model for the country, where diabetes statistics have been primitive. For one thing, Alabamians tend to stay put. They are not migratory, and they tend to live near where they were born. The ethnic populations, which would in-

troduce other variables, are small. Also, Southerners in general know a lot about their families, including illnesses that run in them. Preliminary data collection has demonstrated an amazing awareness of which family member has, or at one time had, diabetes.

The Center will, with sophisticated computer technology, construct family trees, which will demonstrate members at risk. This and other data will be communicated to physicians.

Alabama is also fertile soil for testing the hypothesis that pure African blacks never had JOD (although they did have maturity onset diabetes) but acquired JOD from white genes. The presence of this acquired JOD genetic predisposition in American Negroes may throw light on other aspects of the disease, not just as it affects blacks, who are worst hit by both JOD and MOD.

JOD may also have sub-types, suspected but not yet proven. Untold benefits could come from this Alabama diabetes study, Dr. Roseman believes.

And he is supported in this by Dr. Acton, 37. A microbiologist newly arrived in diabetes research because of its exciting appeal at this time in history, Dr. Acton was born in Birmingham, received his Ph.D. from UAB, and has done extensive research in heart, cancer, immunology and rheumatology.

There is a better than even chance that if a major breakthrough comes in JOD, and beyond that, MOD, a large share of the credit will go to the Birmingham Center—and to the Alabama physicians who, through their participation in the registry, provided the vital keys now being sought.

All to the end that, some day, no children will know the plight of Rhonda Vines. PLEASE TURN PAGE

The JOD Registry: An Alabama First

To Alabama Physicians:

Alabama has recently become the first state in the U.S. to declare Juvenile Onset Diabetes Mellitus (JOD) a reportable disease.

We feel that this offers the health community in Alabama a unique opportunity to attack this disease, which plagues the afflicted patients all their frequently shortened lives.

At UAB's Diabetes Research and Training Center (DRTC) we have brought together a multidisciplinary team of clinicians and basic scientists who direct their attention toward the many aspects of JOD. With the help of the Alabama physicians, new cases of JOD will be reported directly to the JOD Registry under my direction. All cases should be reported to the following address:

JOD Registry

UAB Diabetes Research & Training Center
1808 Seventh Avenue South
Birmingham, Alabama 35294

If the primary physician agrees, the investigators will contact a sample of such patients and their families in order to conduct a number of assessments (HLA typing, anti-insulin and anti-beta cell antibody titers, etc.). We believe that it is important to evaluate such patients as early as possible after establishing the diagnosis to understand the roles of environment, etiology and genetics in the pathogenesis.

All the information obtained on the patients will be made available to the referring physician. Because all data will be computer stored, we will have the opportunity to follow these patients and their families longitudinally.

Again, Alabama presents an excellent environment in which to conduct this type of study, since its people are relatively non-migratory families with several generations easily obtainable. Over a period of time, we hope to obtain enough information to define the predictors of JOD and its sequelae. A clear understanding of the predictors of complications would also aid in establishing the prognosis and conceivably in developing methods to prevent the development of the complications.

The legal responsibility of the physician is to report each case of JOD to the Diabetes Registry as soon as it is diagnosed. The definition of JOD which will be used is:

1. age of onset less than 40 years of age, and
2. (a) fasting plasma glucose of greater than 120 mg percent, or
(b) two (2) hour post prandial plasma glucose of greater than 200 mg percent.

Such a broad definition of JOD was chosen because it will make the physicians' job, of deciding whom to report, easier and it will permit further discrimination of the diabetic subclasses occurring in this age group.

Once the case is reported, the responsibility of the DRTC will be to collect the necessary information without great inconvenience to the patients and to maintain their confidentiality. Selected patients who agree to participate will be evaluated either at the DRTC in Birmingham or in their homes.

At no time will the investigators recommend alterations in therapy to the patient unless the primary physician requests assistance. The DRTC clinicians do provide a telephone consultation service available to all physicians (phone (205) 934-4910) and copies of the most up to date and understandable articles on all aspects of diabetes are available free of charge.

The DRTC will keep the reporting physicians informed of any significant new information about the care of the diabetic and of the available continuing education courses in diabetes.

In summary, Juvenile Onset Diabetes (JOD) is now a reportable disease in Alabama. When a case is reported the investigative efforts of the Diabetes Research and Training Center (DRTC) are mobilized. We hope that this multidisciplinary approach will yield important answers concerning the causes and possible treatments for this disease. We look forward to participating with all of you in this vital research.

Jeffrey M. Roseman, M.D., Ph.D., M.P.H.
Birmingham

An important article,
"Diagnosis and Treatment
of Diabetes Mellitus,"
by Buris R. Boshell, M.D.,
will appear in the
November Journal.
Dr. Boshell is Director
of the Diabetes Research
and Training Center,
UAB Medical Center,
Birmingham.

NEW VISTAS

In The Etiology, Genetics, Pathogenesis And Natural History Of Juvenile-Onset Diabetes

RONALD T. ACTON, Ph.D.

JEFFREY M. ROSEMAN, M.D., Ph.D., M.P.H.*

The last decade has seen a renewed interest in the study of diabetes mellitus and its sequelae. A manifestation of the interest, at the national level, was the National Diabetes Mellitus Research and Education Act of 1974 which established the National Commission on Diabetes. The first report of the National Commission noted that the incidence of diabetes was increasing at an alarming rate and that despite insulin and diet therapy, many diabetics were suffering severe complications and premature death¹. The Commission also noted that there is now much new information which may impact on the understanding of the etiology, genetics, pathogenesis, and natural history of the disease. Realizing the difficulty which the practicing physician may have in keeping abreast of new findings, we have attempted to summarize some of these in a simplified manner in this report. This article will be limited in scope to the form of the disease termed juvenile-onset diabetes (JOD).

Classification Of Juvenile-Onset Diabetes

Most investigators would agree that diabetes mellitus in children, adolescents and young adults can now be classified into two or more types. The most common form of diabetes in this age group is characterized by an abrupt clinical onset, severe symptoms, lack of stimulated insulin output, and a tendency to ketoacidosis. This is the classical form usually referred to as juvenile-onset diabetes (JOD). There is considerable controversy with regard to the appropriate terminology; some clinicians prefer the terms insulin-dependent diabetes mellitus (IDDM) or ketosis prone diabetes².

Within the diabetic population, another form of the disease with an early age of onset has been described where symptoms at diagnosis are either mild or absent and stimulated insulin output is retained (although the response may be delayed or diminished). There is no ketosis and the hyperglycemia usually can be controlled without insulin.

This form has been termed Maturity-Onset type Diabetes of Youth (MODY)³. MODY mimics symptoms seen in maturity onset diabetes (MOD) in the adult. Like MOD, MODY is also often associated with obesity.

Etiology Of JOD

Although the etiology of JOD remains poorly understood, some tantalizing clues are now available. The demonstration that viruses can produce diabetes-like syndromes in laboratory animals has added to the suspicion that viruses may be involved in diabetes in humans⁴. In rats, guinea pigs and mice, several types of viruses have been shown to initiate an insulin-dependent type of diabetes. Epidemiological studies have implicated an association between viral infections and the onset of the disease in man⁵. There have been several instances where certain viral infections immediately preceded the onset of JOD⁶. Mumps has been implicated in a number of these reports⁶⁻¹⁴. Perhaps this virus has been suspect more than others due to the fact that pancreatitis is one of the complications of infection. One of the more convincing case studies reported diabetes in several

*Departments of Microbiology, Public Health and the Diabetes Research and Training Center, University of Alabama in Birmingham, University Station, Birmingham, AL 35294.

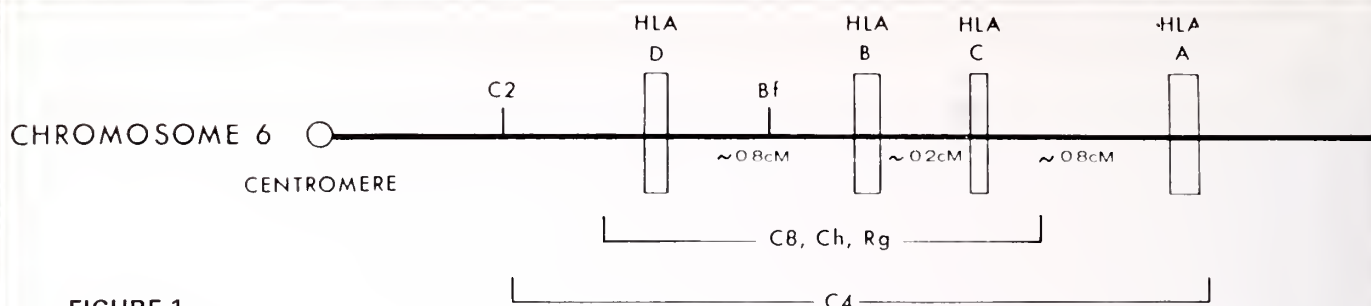


FIGURE 1.

DIAGRAMMATICAL REPRESENTATION OF THE MAJOR HISTOCOMPATIBILITY COMPLEX IN MAN

In addition to the three serologically determined (SD) loci, HLA-A, -B and -C and the major lymphocyte locus, HLA-D the position of a number of other genes are depicted. These include complement components C2, C4 and C8, properdin factor B (Bf), and the red blood cell surface antigen Chido (Ch) and Rodgers (Rg). The HLA-D locus is approximately 0.8 centimorgans from HLA-B, HLA-B is approximately 0.2 centimorgans from HLA-C and HLA-C is approximately 0.8 centimorgans from HLA-A.

New Vistas

siblings following mumps infection¹¹. In a recent review, it was argued that direct evidence of mumps actually replicating in pancreatic acinar cells or human beta cells was lacking⁴. However, this past year the infection of human beta cells with a strain of mumps was demonstrated¹⁵.

Although this observation *in vitro* does not prove that mumps can cause diabetes *in vivo*, it is intriguing and deserves further study. As the investigators pointed out, "the near universal prevalence of mumps makes it clear that special conditions must prevail before the beta cell can be infected and the pathological condition produced." The fact that an increased incidence of JOD follows only certain mumps epidemics suggest that a particular variant might be involved.

Maclaren has suggested that mumps vaccination can be implicated as an initiating factor in JOD. Preliminary data from the Baltimore area revealed an increased incidence of JOD during the first four years following the initiation of the mumps vaccination program¹⁶. In addition to mumps, a number of other virus infections (coxsackie, rubella, measles, polio, influenza, cytomegalovirus and tick-borne encephalitis) have been temporarily associated with the onset of JOD^{5,6,17,18}.

Much of the epidemiologic information concerning the cause of JOD comes from registries in England and Denmark where JOD is a reportable disease¹⁹⁻²⁴. Based on the registry data from these two countries, it was found that there was a seasonal association with the number of reported cases. In both countries the highest number of cases was reported during the autumn and winter months²⁰⁻²³. This seasonal association is consistent with that found in a variety of viral associated illnesses.

By investigating the cases reported to the registry in England, an association was found between JOD and antibody titers to coxsackie B4 virus²⁰⁻²². A case of acute onset diabetes has been reported where high titers of antibodies reacting with coxsackie B2 were present²⁴. Unfortunately, epidemiological data concerning JOD in this country is sparse due to the fact that until recently there have been no registries in the U.S. for this disease. We hope that the establishment of a JOD registry by the State of Alabama in 1978 will help to correct this situation.

Taken as a whole, all the evidence implicating viruses is largely circumstantial, based primarily on animal, *in vitro* and epidemiological evidence. More studies must be undertaken in newly diagnosed patients with JOD in order to gain more substantive information concerning its etiology.

Genetics Of JOD

Diabetes mellitus has long been considered a familial disease due to the observed aggregation of the illness in certain families^{25,26}. More recent findings have supported a genetic component. Pyke²⁶ investigated 150 pairs of monozygotic twins in which at least one twin had diabetes. There were 106 pairs of twins whose disease appeared before the age of 45. In 54 of these pairs the disease had developed in both twins, while in 52 pairs only one twin was diabetic. In contrast, in those twin pairs with age of onset after 45 years, 39 of the 44 were found to be concordant for the disease.

These studies suggest that factors other than heredity must have been involved since almost 50% of the identical twins were discordant for the disease. In a study of 296 diabetics and their

relatives, Irvine and co-workers²⁷ reported an association between the type of diabetes in the proband and the type in their first degree relatives. The diabetics were typed according to their dependence or non-dependence on insulin. The studies did not reveal any association between the two types suggesting they are genetically distinct.

Nelson, et al.²⁸ have compared 49 pairs of identical twins where 27 were discordant and 22 concordant for JOD for antibodies to a variety of viruses. They found no significant difference in the level of antibodies to any of the viruses between discordant and concordant twins. These studies all provide evidence for a genetic component in the susceptibility to JOD, but the high ratio of discordance suggests that other factors are also involved.

Further evidence for a genetic component in JOD has come from studies demonstrating an association of JOD with a variety of genetic markers. The markers which have been examined most thoroughly are those in the major histocompatibility complex found on human chromosome number 6. (See glossary of terms)²⁹. Genes in this region code for the cell surface antigens which govern whether a person will accept or reject a transplant. Because these antigens were originally discovered on white blood cells, they were called Human Leukocyte Antigens (HLA). There are at least four different kinds of HLA antigens on the surface of the cell, each coded for by a gene at a different site or locus on the sixth chromosome. These antigens have been designated HLA-A, HLA-B, HLA-C and HLA-D. The first three antigens are detectable by antibody tests. The HLA-D antigens were originally only detectable by the reaction of lymphocytes from one individual toward those of another. Recently, antigens found only on B-lymphocytes have been found to be coded for by the HLA-D locus³⁰. These antigens are serologically detectable.

There is currently disagreement in the literature about whether the lymphocyte-detectable antigen and the antibody-detectable antigen are identical. In addition to the HLA genes, the chromosomal region contains genes which control immune responsiveness and susceptibility to disease^{29,31}. The genetic map of the major histocompatibility complex is depicted in Figure 1.

A unique feature of the HLA genes is their polymorphic nature. This means that each gene can take multiple forms. There are already 20 different forms of HLA-A known and 33 forms of HLA-B (Figure 2). It is this multiplicity of possible forms which make the possibility of finding an HLA-identical transplant so unlikely.

It is important to point out that, similar to blood group types, the frequency of given HLA antigens will vary widely among different ethnic and racial groups. Since there are two copies of chromosome 6 in each individual, there are usually 2 different forms of each HLA antigen present on the surface of the cells. By performing family analyses it is possible to determine which HLA antigens are on each of the chromosomes. The HLA antigens on each chromosome comprise the haplotype. It has been found that certain forms of HLA-A are more likely to be linked to certain forms of HLA-B than one might expect by chance. This is called linkage disequilibrium.

Numerous studies have shown an increased proportion of two HLA types, B8 and B15, and decreased number of B7 in individuals with JOD when compared to normal controls^{32,38}. There does not appear to be an HLA association with MOD. Relative risks of 3.1 for JOD in those individuals with B8 and 2.1 in those with B15 have been calculated. When an individual has both B8 and B15, the relative risk for JOD is 9.8⁵⁷.

Antigen Increase

A marked increase in certain C and D locus antigens has also been shown in insulin-dependent diabetes^{39,41}. Although other HLA specificities in addition to B8 and B15 have been shown to be associated with JOD in Japanese, Italian, French, and Jewish populations, these findings need to be independently verified before they are accepted⁴²⁻⁴⁵. It is interesting to note that there are a number of "autoimmune" type disorders such as celiac disease⁴⁶ and Graves' disease where the afflicted individuals have an increased prevalence of B8 and a decreased prevalence of B7⁴⁷.

These studies are consistent with a gene influencing the presence of JOD linked to the HLA genes. In order to determine if there is a HLA linked gene, it is necessary to study families with more than one member affected with JOD. Barbosa, et al.^{48,49} have investigated 24 families in which two or more siblings had JOD. Fifty-five percent of the diabetic sibs were identical for both HLA haplotypes (25% expected), 40% were identical for one haplotype (50% expected) and 5% were different for both haplotypes (25% expected).

The sibs sharing identical HLA haplotypes were more concordant for age of onset and season of incidence than the sibs sharing only one haplotype. Moreover, the sibs sharing both haplotypes were more likely to develop diabetes in the winter months than the sibs sharing only one haplotype. The investigators interpreted their results as being

compatible with linkage between HLA and an autosomal recessive diabetogenic gene with 50% penetrance in the families studies⁴⁹. In another family studied, the data supported a similar interpretation⁵⁰. This view is not shared by all and is now a point of controversy⁵¹. The data from these studies could also support a multiple gene model of JOD susceptibility.

There may be genetically defined characteristics other than HLA which are associated with diabetes. Andersen and Lauritzen⁵² found a significant excess of Lewis blood group antigen Le(a+) in male and female diabetics. In this study, diabetics were not distinguished into JOD or MOD. Recently, another group of investigators⁵³ have observed the Lewis negative (Le a-b-) red blood cell phenotype to be 3 times more frequent in diabetics regardless of disease type (JOD or MOD) as compared to controls. This study was conducted on various ethnic groups in the south of France and needs to be repeated on other populations.

Mourant⁵⁴ has pointed out that another genetic trait, inability to taste phenylthiocarbamide (PTC), is associated with diabetes. In this case, however, a larger sampling is needed before the association with JOD can be ascertained. It is interesting to note that persons who are B8 and PTC tasters have a 5.8 fold increased risk of developing Graves' disease⁵⁵.

Pathogenesis Of JOD

a. *Anti-pancreatic islet cell antibodies*

There is considerable evidence that autoimmune phenomena are involved in the pathogenesis of JOD^{16,56,57}. Indirect evidence to support such as hypothesis has been provided by observations of the clinical association between diabetes and a number of established autoimmune diseases such as thyrotoxicosis, idiopathic Addison's disease and Hashimoto's thyroiditis⁵⁸⁻⁶⁰. More direct evidence in support of an autoimmune hypothesis has been obtained by the detection of circulating antibodies against pancreatic islet cells in the serum of a number of patients having insulin-dependent diabetes as well as with idiopathic Addison's disease and other autoimmune disorders^{61,62}.

Irvine and co-workers^{27,63} demonstrated the presence of circulating anti-islet cell antibody in insulin treated diabetics with and without associated overt organ-specific autoimmune diseases. Their results revealed that diabetics with associated overt organ specific autoimmune diseases had the highest prevalence of anti-pancreatic islet cell

antibody. They also reported that the prevalence of islet cell antibody was inversely related to the duration of the disease. They found it in 60% during the first year after diagnosis in the insulin-treated group, 20% in 2 to 5 years and 0.5% in 10 to 20 years⁶³. A similar finding has been reported by at least one other group⁶⁴. The presence of antipancreatic islet cell antibody may be diagnostically useful as an indicator of the type of diabetes patients may have⁶⁵. These antibodies are present in high titer in 45.4% of patients presenting with JOD as compared to 19.4% in patients presenting with MOD.

b. *Cellular hypersensitivity to pancreatic tissue*

Cell mediated immunity toward pancreatic tissue has also been described in patients with JOD^{16,66,67}. Richens, et al.⁶⁸ have demonstrated that insulin dependent diabetics have delayed skin test hypersensitivity to pancreatic preparations. Recently lymphocytes from dependent diabetic patients have been transferred into athymic nude mice. The mice subsequently developed high blood glucose concentrations⁹⁹.

c. *Insulin antibodies*

In addition to antibodies to pancreatic islet cells found in relatively newly diagnosed patients, many diabetics treated for a year or more with exogenous insulin make significant amounts of antibodies to insulin⁶⁹⁻⁷². Dixon and co-workers⁷³ suggested that labile diabetes may be explained by the presence of high affinity anti-insulin antibodies in such patients. This has been supported by the finding that the sera of "brittle" or difficult to control diabetics often have a high binding capacity for porcine and human insulin soon after the initiation of treatment⁷⁴.

d. *Immune complexes*

Irvine, et al.⁷⁵ have found immune complexes in the sera of newly-diagnosed insulin dependent diabetics. This is of interest in view of the suggestion that patients with high titers of insulin antibody may be those who are prone to develop vascular complications⁷⁶. The demonstration of gamma-globulin and C3 deposits in kidneys and dermal vessels of diabetics also supports a possible role for immune complexes in initiating diabetic angiopathy⁷⁷⁻⁷⁹. Insulin antibody complexes have been found in the endothelial lining and basement membranes of retinal vessels as well⁸⁰.

f. *Impaired immunity*

There have been a number of other studies indicating a possible impairment of the immune

NOMENCLATURE FOR FACTORS OF THE HLA SYSTEM — 1977

system in juvenile-onset diabetics. Two studies have demonstrated impaired lymphocyte transformation in poorly controlled diabetics^{81,82}. Impaired chemotaxis and phagocytosis have been found in diabetics with ketoacidosis or hyperglycemia without ketoacidosis⁸³⁻⁸⁶. However, Fikrig and co-workers⁸⁷ found that the chemotaxis of polymorphonuclear cells from adult and juvenile-onset diabetics is comparable to control subjects. Ludwig, et al.⁸⁸ have shown a reduction of agglutinating antibodies to bacterial antigens in patients with JOD. They postulated that humoral deficiency might be partly responsible for susceptibility to bacterial infections in these patients.

Several studies^{82,89} have demonstrated a statistically lower number of peripheral T-lymphocytes in juvenile-onset diabetics as compared with maturity-onset diabetics or normal subjects. This suggested the possibility of an altered cell mediated immunity in juvenile-onset diabetics. In a small sample of patients, Horowitz, et al.⁹⁰ observed that 6 of 9 insulin dependent diabetics lacked suppressor T-cell function.

If this observation is correct it could account for the autoimmune phenomena which appears to be associated with the pathogenesis of JOD. Nonetheless, as one can readily appreciate from a survey of this literature, the immune competence of the juvenile-onset diabetic and its role in the pathogenesis is still a subject of much controversy.

Natural History Of JOD

It is now clear that the HLA phenotype of given individuals may be used to estimate their risk of developing JOD. There is a wealth of data which will now be reviewed suggesting that HLA phenotypes can also be used to categorize JOD into additional sub-types whose prognosis differs. In one study, the frequency of HLA-A1 and HLA-B8 was significantly higher in insulin-dependent diabetics with terminal glomerulosclerosis and retinopathy⁹¹. This led the investigators to put forth the concept that microangiopathy is one of the HLA-B8 associated disorders. Bertrams and Gruneklee⁹² demonstrated a positive association of HLA-B7 with cutaneous allergic reactions to insulin in 44 patients. This study is interesting in light of the finding that HLA-B7 positive JOD patients had lower levels of insulin-binding antibodies⁹³. It has been suggested that HLA-B7 might be associated with a different and perhaps milder form of JOD.

Bertrams, et al.⁹⁴ as well as Schernthaner, et al.⁹⁵ have confirmed that a strong immune re-

Locus A	Locus B	Locus C
A1	B5	CW1
A2	B7	CW2
A3	B8	CW3
A9	B12	CW4
A10	B13	CW5
A11	B14	CW6
A25(10)	B15	
A26(10)	B17	
A28	B18	
A29	B27	
AW19	B37	
AW23(9)	B40	
AW24(9)	BW16	
AW30	BW21	
AW31	BW22	
AW32	BW35	
AW33	BW38(16)	
AW34	BW39(16)	
AW36	BW41	
AW43	BW42	
	BW44(12)	
	BW45(12)	
	BW46	
	BW47	
	BW48	
	BW49(21)	
	BW50(21)	
	BW51(5)	
	BW52(5)	
	BW53	
	BW54(22)	
Locus B		Locus D
BW4		DW1
BW6		DW2
		DW3
		DW4
		DW5
		DW6
		DW7
		DW8
		DW9
		DW10
		DW11
		Locus DR
		DRW1
		DRW2
		DRW3
		DRW4
		DRW5
		DRW6
		DRW7

FIGURE 2.
LISTED IS THE NOMENCLATURE ASSIGNED TO IDENTIFY THE VARIOUS FORMS OF THE HLA GENES EXPRESSED ON THE SURFACE OF THE CELLS.

sponse to insulin is associated with B15 while non-responders had an increased frequency of B7 and/or B8. There is also an increased frequency of pancreatic islet cell antibodies in B8 individuals with JOD as compared with those patients lacking this HLA specificity^{57,96}.

These data have led Rotter and Rimoin⁹⁷ to suggest that JOD is made up of at least two distinct forms based on immunologic as well as metabolic criteria. Table 1 is a summary of the present data and illustrates how patients could be categorized. One might predict that the B8 patient would have higher levels of immune complexes due to the increased levels of pancreatic islet cell antibodies and increased microangiopathy. However, the B15 patient might also have higher levels due to the

CONTINUED ON PAGE 34

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Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release. One 75 mg. tablet daily, swallowed whole, in mid morning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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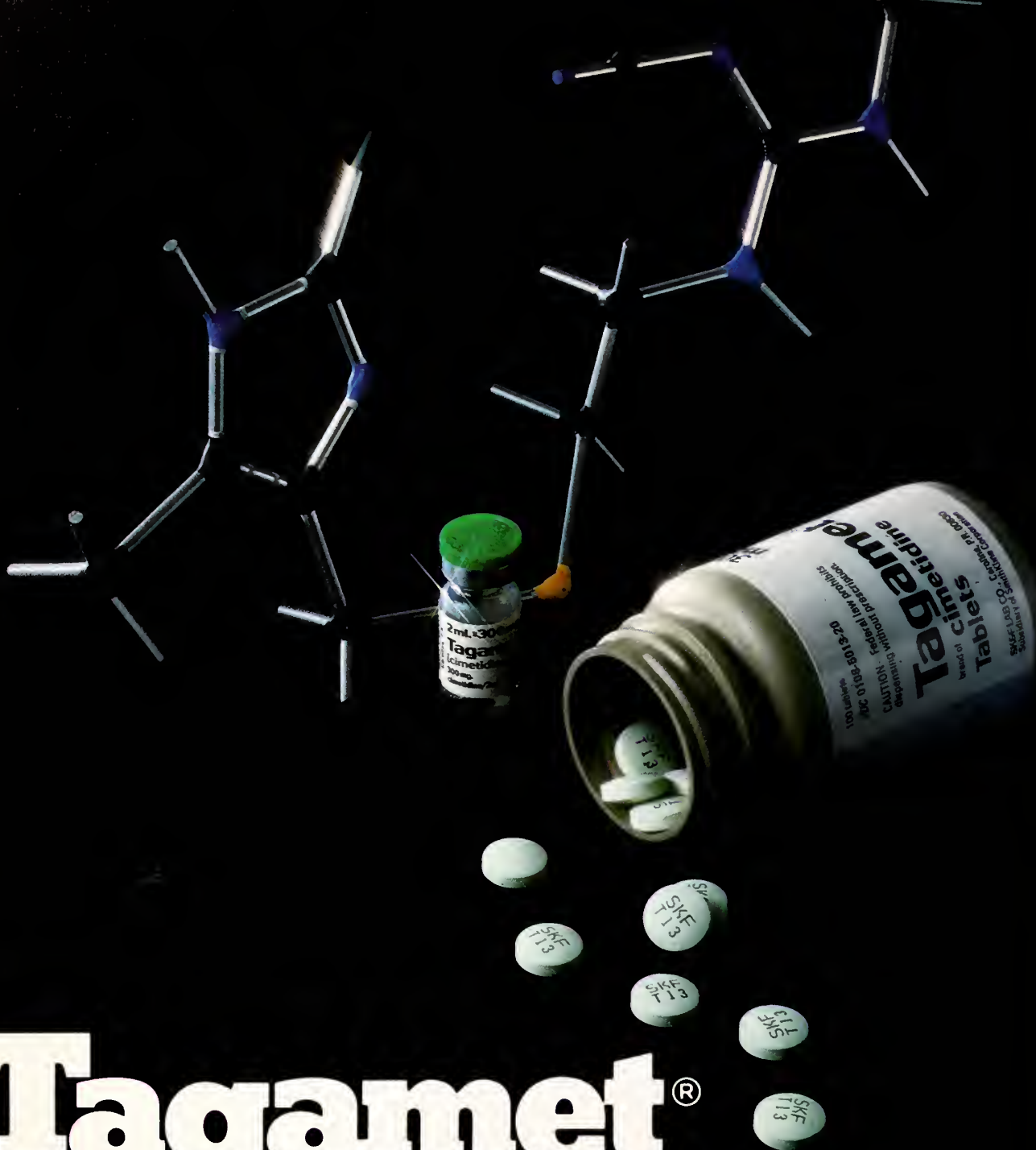
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TABLE 1
THE CATEGORIZATION OF INDIVIDUALS WITH JOD BASED ON GENETIC,
IMMUNOLOGIC AND PATHOLOGIC ASSESSMENT⁺

Parameter	B 8	B15
Relative risk for JOD++	3.1	2.1
B8+B15 additive Risk for JOD	9.8	
Linkage disequilibrium with other HLA loci	Increased Association with DW3	Increased Association with CW3
Twin studies	Increased in concordant twins only	Increased in concordant and discordant twins
Insulin antibodies	Nonresponder (no antibodies)	High responder (produce antibodies)
Diabetic complications	Increased microangiopathy	Not increased
Islet cell antibodies	Increased	Not increased
Antipancreatic cell-mediated immunity	Increased	Not increased
Associated with other autoimmune endocrine diseases	Yes	No
HLA B7	Decreased	Normal frequency
Associated Disorders in isolated pedigrees	Autoimmune disorders	Defect in insulin release

⁺Table modified from Rotter and Rimoin (97)

⁺⁺Relative risks from Christy et. al. (57)

New Vistas CONTINUED FROM PAGE 29

increased level of insulin antibodies. It will be of interest to correlate the presence of immune complexes with vascular and kidney disease as well as HLA phenotype in a large group of patients. We predict that another set of parameters for predicting sequellae may result from such investigations.

Summary

It is our belief that the studies cited in this review have provided some important preliminary clues concerning the etiology, pathogenesis and natural history of JOD. Clearly, further investigations of a larger sample of patients are required. Nonetheless, on the basis of the currently available data a working model of the pathogenesis of JOD can be constructed which brings these many findings into harmony.

First, although genetics appears to play a major role in determining disease susceptibility, it is not yet possible to determine the type and number of genes responsible for this predisposition. Providing an individual is predisposed to the disease, environmental factors then become important in determining which of those individuals will develop the disease. The strongest argument for this postulate

is the identical twin data which demonstrated that one twin can develop JOD without the other.

There may be at least two components in the environment necessary to initiate the disease. One could be various substrains of relatively common viruses which have a propensity for infecting the beta cells of the susceptible pancreas. That one of the diabetogenic genes may, in fact, code for a beta cell membrane viral receptor has recently been suggested^{9,8}.

There also may be a second component involved in the environment which could be a mutagenic agent which renders the beta cell more susceptible to attack by virus. Once the virus becomes entrenched in the beta cell, individuals with the appropriate gene(s) would subsequently develop an autoimmune response directed towards the beta cell. Whether an autoimmune mechanism brings about destruction of the beta cell is not presently known. It could be a cell mediated or humoral type of response to the altered beta cell. In the course of the disease one finds that individuals with a certain genetic constitution (B15 phenotype) begin to produce antibody against injected exogenous insulin.

We propose that the complications that one observes developing in many JOD individuals may be a consequence of the immune complexes. At this juncture, one can not ascertain which type of antibodies and antigens will be more likely to form immune complexes. Again, the complications which subsequently develop are in part determined by the genetic constitution of the individual.

It is our belief that a two gene hypothesis for diabetes may be necessary in order to explain the heterogeneity of the natural history of this disease. Again, longitudinal studies using larger samples of patients including various races and ethnic groups should clarify this supposition.

If pancreatic islet cell destruction is due to autoimmune processes, then there are presently various types of intervention which might alter the natural history of JOD. Anti-inflammatory agents

and/or immunosuppressive agents might be effective early in the disease. Patients with JOD often go through a "honeymoon" period soon after presenting. This phenomenon may represent partial regeneration of the beta cells which is aborted when these cells are confronted with a strong autoimmune response. Therefore, drugs which would suppress the immune response could possibly protect these remaining or regenerating beta cells. In the future it is possible that the same drugs may prove to be of use in preventing vascular and glomerular complications that are due to immune complex deposition.

As medical science gains more knowledge concerning the genetics, etiology, pathogenesis and natural history of JOD at the molecular level, more possibilities should be forthcoming as to how JOD may be prevented and as to how the complications may be ameliorated.

GLOSSARY OF TERMS

Gene—the basic unit of inheritance that segregates during meiosis; usually equated with a segment of DNA that codes for the synthesis of a single polypeptide chain.

Locus—the position of a gene on a chromosome.

Alleles—alternate forms of a gene which occur at the same locus.

Polymorphic locus—a locus at which two or more alleles occur with appreciable frequencies in the same population.

MHC—major histocompatibility complex: a chromosomal region consisting of loci that control the synthesis of transplantation antigens and have fundamental roles in the immune process.

HLA—Cell surface antigens coded by genes at the MHC of man. Individual HLA loci are given letter names (such as HLA-A and HLA-B) with alleles designated numerically (such as HLA-A1 and HLA-B8) or, for tentative assignments with a prefix w for "workshop" (such as HLA-Bw35 and HLA-Dw2).

Haplotype—the haploid genetic composition of a chromosomal region: a series of alleles in a defined segment of a chromosome that are usually transmitted from parent to offspring as a unit; two haplotypes, one from each parent, constitute the genotype.

Genotype—The genetic constitution of a given individual, i.e., the genes carried by that individual.

Phenotype—As it relates to the histocompatibility antigens, this term refers to the antigens that are

expressed and recognized on the cells of an individual.

Linkage—two or more loci on the same chromosome sufficiently close that they tend to segregate together.

Linkage disequilibrium—the tendency in a population for some alleles at closely linked loci to occur together in the same haplotype more often than expected by chance (for example, in Caucasians the HLA haplotype A1,B8 occurs considerably more often than the product of the individual frequencies of these alleles).

Relative Risk—This is the ratio of the incidence of a disease in two populations. In many of the studies reported in this review, the relative risk is estimated by the odds ratio. The odds ratio is also called the cross products ratio. The example below is from a British study comparing the prevalence of HLA-B8 in persons with JOD with the prevalence of HLA-B8 in a control group.

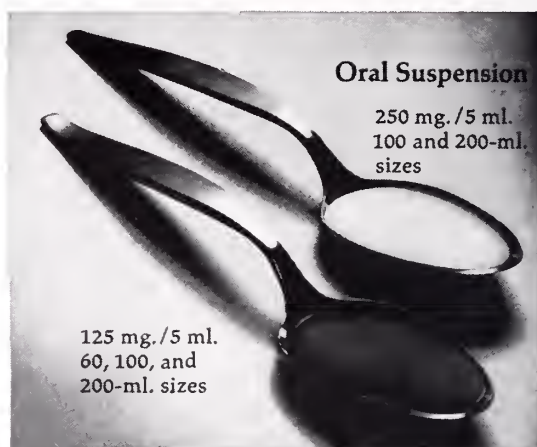
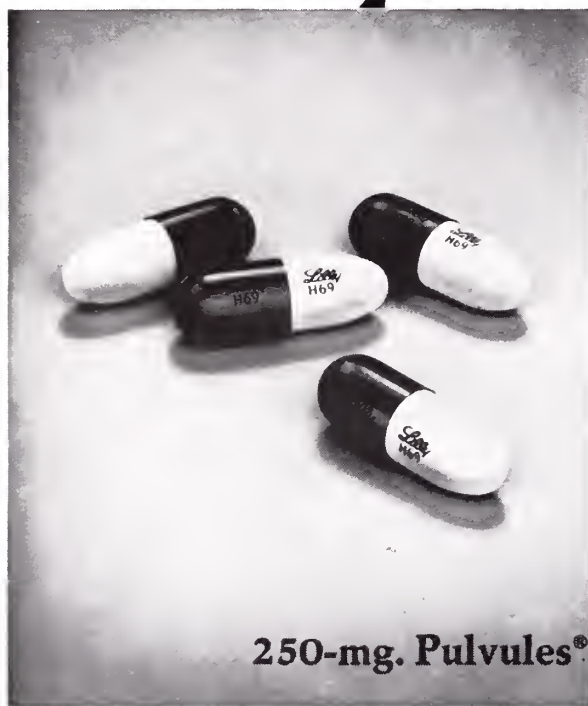
	JOD's	Control's
HLA-B8 present	74	93
HLA-B8 absent	76	207

$$\text{odds ratio} = \frac{74 \times 207}{76 \times 93} = 2.17$$

Proband—The individual in a family in whom the disease was first identified.

CONTINUED ON PAGE 37

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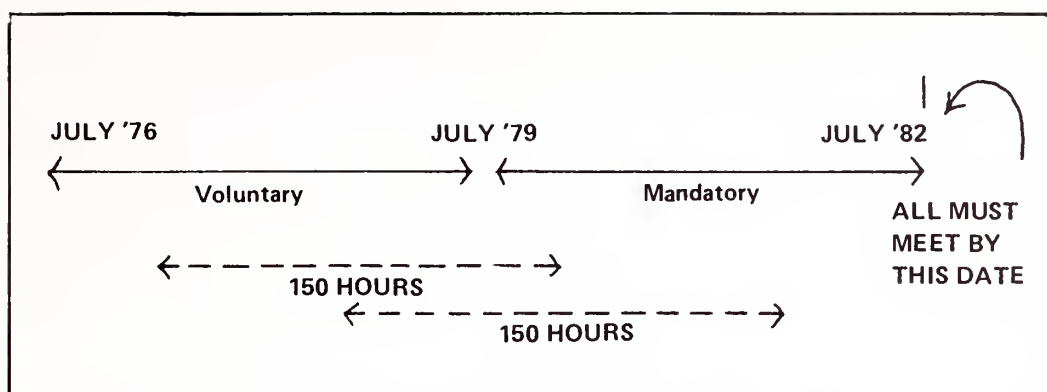
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The CME Requirement Update

by George D. Oetting, Ed.D.,
Director of Education

If my recent personal conversations are any accurate sampling, many MASA members evidently are still a bit uncertain about all the details of the upcoming CME membership requirement.

This article (which is a revised version of an *Alabama M.D.* article) is designed to review these details and present helpful suggestions to the membership. Please excuse the repetition, but we have found through experience that it is sometimes necessary, to insure all the troops to get the clear and ungarbled word.

The Requirement: After much discussion and debate, a CME mandate for MASA membership was adopted in 1975. Attaining the AMA Physician's Recognition Award (PRA) or an approved equivalent alternate program will be the basic requirement for continued membership in the Association.

The PRA requires 150 hours of CME over a three-year period. This can be achieved by the physician in any manner desired, e.g. 50 hours per year, all in the last year or whatever pattern works best for the individual.

In addition to the PRA, the national CME programs of the following nine specialties are also approved as satisfying the MASA CME membership requirement: American Academy of Dermatology (AAD); American Academy of Family Physicians (AAFP); American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CNS); American Col-

lege of Emergency Physicians (ACEP); American College of Obstetricians and Gynecologists (ACOG); American College of Radiology (ACR); American Psychiatric Association (APA); American Society of Clinical Pathologists/College of American Pathologists (ASCP/CAP); and American Society of Colon and Rectal Surgeons (ASCRS).

Who Has This Requirement? All MASA members except those fully retired from practice, those still engaged in formal medical or specialty education or non-resident members.

Those with impaired health or special problems may be temporarily exempted by the Board of Censors.

When Does It Become Effective? July 1, 1979, is the starting date for this requirement, so the first three-year period for all members will cover July 1, 1979 to July 1, 1982.

At the end of that period, all members should have completed at least 150 hours of CME and reported this to the AMA, AAFP or other approved agency which issues the CME certification. (MASA does not review individual hours, attendance records etc. — the physician should submit required documents to the certifying agency. All we need is information on who certified your efforts and the period of certification.)

You are encouraged to start your own three-year period of participation prior to July, 1979. Many MASA members have already been awarded PRAs for past CME efforts.

If you already have completed a number of hours of CME, you can elect to "go back" in your three-year

period and get this credit. Your period might then cover January 1978—January 1981.

The diagram explains.

What CME Counts for the Requirement? All kinds of educational activities are creditable for CME — not just the live Category I lecture programs put on by some big medical institution. These Category 1 programs, sponsored by a CME accredited organization, do make up 40% of the PRA requirement (60 hours).

However, the other 60% (90 hours) can be credited for such learning activities as attending scientific meetings of non-accredited medical groups (Category II), medical teaching (Category III), preparing articles, books, etc. (Category IV), and self-study of tapes, journals, participation in audits and patient care meetings (Category V). Check the AMA booklet sent to you on the PRA for further details; MASA also has a "CME Fact Sheet" which is available to you.

So you can see that the active physician who keeps up in his area, and participates in local medical activities of his hospital and societies, should be able to meet this CME requirement without any great difficulty.

Where Can I Get Needed CME? There are many CME "producers" within the state, including MASA, medical schools, hospitals, specialty societies and others. Information on upcoming Alabama CME programs is published in the M.D. Calendar and further information is available from

THE CME REQUIREMENT UPDATE

the Education Department's Master Calendar.

How Can I Keep Track of My CME?
This is the tough part for many members, according to my personal discussions with some. Most Category I CME producers will issue attendance certificates of some sort which can be filed. However, you are "on your own" for keeping track of most other CME activities since the majority of these are self-initiated. Only you will know how many hours you have spent in such activities as reading journals, medical teaching, patient care conferences, etc.

We would recommend that you establish some sort of personal CME folder to file all certificates, forms, etc. — perhaps your secretary could maintain this for you. Then you need

to remind yourself to make a note, each time you are involved in CME and put it in your CME folder, so you won't forget. It is very hard to remember and document your CME efforts if you wait three months or years to put it altogether.

To assist MASA members in this area, the Education Department is currently designing a special CME Record File with all needed information and procedures printed on the file folder, and space inside to keep your documentation. This file will be sent to each MASA member later on this year. □

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Here are four tips to assist you in your relationship with the health insurance industry.

Make Them Readable

Frequently, claims are submitted with illegible information. You and your medical assistant may be familiar with each other's handwriting, but, a claims examiner who reviews many different physicians' handwriting may have difficulty deciphering the message.

If that's the case, several things can happen. The examiner may contact your office by phone or mail asking for an explanation or clarification, which causes an unnecessary interruption. Or, the claims examiner may make an assumption about what was reported, which may result in under- or over-payment, which creates a book-keeping problem. The solution? Submit a legible claim the first time, preferably typewritten.

List Symptoms, As Well As Diagnosis

Without a complete diagnosis, don't expect to be paid. And be sure to include a description of the relevant

symptoms. Insurance carriers base their payments on medical necessity, and there tends to be correlation between the services reported and diagnoses. But in some cases your final diagnosis may not be related to the service or services you performed.

By reporting the symptoms, as well as the patient's initial complaint along with the final diagnosis, the claims examiner can equate the two with the service. When everything fits together, you get paid.

Talk The Same Language

This means you and the carrier must use the same terminology. There are several medical terminologies in use: AMA's CPT, Blue Shield, and California RVS to name a few. You should be aware of, and use the terminology most often used in your area. When you and the carriers speak the same language, claims will be paid quickly and accurately.

Be Sure Your Report Is Complete

Report each service performed separately with your individual charge for each.

Here's an example: if you gave a patient 10 days of in-hospital medical care, break your services down to show, for instance, that one was an extended visit; four were intermediate visits, and five visits were brief visits. Proper reporting using AMA's CPT is illustrated below.

Remember that good communication through properly completed forms assists both you, your patients, and the carrier. And, of course, there's no substitute for knowledgeable staff people.

If your claims are delayed because of "people problems" rather than "paper problems," call the carrier and ask when their next training session will be held or have a professional relations representative visit your office. □

PROPER REPORTING USING AMA'S CPT

10/1/77	90270	One (1) extended visit @ \$ _____ — total \$ _____
10/2/77 thru 10/5/77	90260	Four (4) intermediate visits @ \$ _____ — total \$ _____
10/6/77 thru 10/10/77	90204	Five (5) brief visits @ \$ _____ — total \$ _____



AUXILIARY

Mrs. Aubrey E. Terry
President, A-MASA

I. P. S. – Part One

During recent years it has become apparent that many doctors at both the state and national level are getting more concerned with the impaired physician and his plight.

Much thought is being directed at the cause and treatment for these varied ills. A lot of effort is being put forth to develop worthwhile programs to help prevent and alleviate anticipated difficulties.

I believe this increased awareness and desire for involvement is good. And I feel that where possible we should not limit our concern to one group or profession.

However, in this article I do want to give some attention to the impaired physician's spouse and impaired spouse of a physician. We do not yet know the frequency of this malady, but it is reportedly more prevalent than one might think.

To date, research in this area is somewhat limited, and it is hard to draw accurate conclusions from previous observation. More often than not the unusual exception has received the most attention. For instance, in the past a projected image representative of a physician's wife has all too often been stereotyped and incorrect. Maybe

on occasion we have seemed a bit aloof, not giving the appearance of having quite sufficient interest or genuine concern for our own as well as those around us.

And on rare occasion a thread of unusual resentment may wind its way into our ranks. But this response represents the exception and not the rule. Given the opportunity, I believe that most physicians' mates are warm human beings who wish to give normal expression to their thoughts, and desire acceptable social interchange with their families and friends.

Almost everyone wants to feel needed, wanted and secure within their homes, and most of us ascribe to the belief that life should be considered as being more than "one continuous party or one persisting toil."

Unfortunately, the physician's wife may not, on all occasions, possess the keys to all the locks which prepare one to arbitrate with perfect finesse and success. Even though we sometimes do not retain all the experience one might desire, there is no reason for us not to fully try:

- Try to undergird and understand our families and friends.

- Try to give support, back-up and, on occasion, guidance to one whose day may go well ahead or bad, seem bright or dull.

- Give assistance to those who may have received training under one set of rules and now be required to perform by using others.

- Give support to those whose inherent resistance to constant change may be strong, but who have been compelled to accept frequent change without constant resistance.

So as we pursue ways for developing and teaching better general health habits, let us first make the effort to promulgate among ourselves those health principles which are most significant and effective. Let us continue to read, to be enlightened by participating in conferences and seminars, and as we grow become more adept at applying what we know for the betterment of our families, friends and those within our communities.

Hettie

Doctor, I will appreciate your sharing the JOURNAL with your spouse.

The Uninformed Patient- An Unnecessary Risk

Physicians are being sued often and successfully. Yet a large percentage of these professional liability suits have no objective medical or legal merit. We at Jeppesen Sanderson believe comprehensive and documented patient education is an essential part of the solution to this phenomenon.

MED PREP or Medical Patient Risks Education Program was developed for this purpose. The planned MED PREP library of over 250 audiovisual presentations will cover 16 specialties. Each film describes a medical or surgical procedure along with a number of significant potential risks and, in most instances, some possible alternative courses of treatment.



The MED PREP information is presented in easy-to-understand language and in a warm and personal manner. After viewing the film and being given the accompanying briefing folder, the patient signs the folder's tear-off portion which then can become a part of the patient's permanent file.

MED PREP provides sensitive and perceptive patient briefings and documents that the information has been received. MED PREP is now available to Alabama physicians through the Medical Association of the State of Alabama. For more information about MED PREP and the benefits to patients and physicians, contact Dianne Juhan at 263-6441.

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BEACH HOUSE TOWNHOUSE on the beach at Gulf Shores, Alabama. Pool/minutes from three golf courses/all furnishings included/two bedrooms/1½ baths/built-in kitchen/2 car carport/private deck. APRIL & SEPTEMBER—\$40.00 per day (3 day minimum); MAY 1-LABOR DAY—\$50.00 per day (1 week minimum). CALL FOR RESERVATIONS—AC205/269-4094 or 281-3102.

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WANTED: General practice psychiatrist to work with community mental health program. Have an understanding of community mental health work, able to work with a wide variety of staff, willing to do some travel within catchment area on scheduled basis. Contact Montgomery Area Mental Health Center, 1616 Mt. Meigs Road, Montgomery, Alabama. Telephone 263-7541.

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7545, evening hours 553-2198.

Position No. 1—Small Hospital—Out-patient census 8 day. 2 objectives. Want to increase E.R. census as well as In-patient census. Guaranteed \$75,000-\$80,000 plus 30% of in-patient gross billing—Work Mon., Tues., Thurs., Fri. days—Mon. & Thurs. evening. May take call at home. 10 miles from Medical Center.

Position No. 2—Large E.R. practice with University appointment. Guaranteed \$40-\$45/hr. May work position No. 1 or No. 2 or combination.

3-4 weeks paid vacation and convention time plus convention allowance \$600.00. Health, disability, life ins., pension & profit sharing, car leasing, and yearly bonus. May act as a consultant or do major surgery for group. (Will provide a billing service). Contact: T. L. Chastain, M.D., Ph. (205) 365-9606 Mon.-Fri. 9 a.m. - 5 p.m. or P. O. Box 11142, Montgomery, Alabama 36111.

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ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

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40,000 guarantee, moving, other—Send C.V. to Dr. R. Wiltsie, Box 57026, Birmingham, Alabama 35209.

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For Sale: Technigon dual channel Autoanalyzer—complete with some manifolds and dual recorder readout. Excellent and working condition — would be excellent for a small hospital or large office clinical laboratory. Price \$6,000.00 or offer. David W. Ploth, M.D., 934-3806.

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ROCHE

For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days



- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice

- Convenient b.i.d. dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morgani*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. **Note:** The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
		Teaspoonfuls	Tablets
lbs	kgs		
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100, Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

ROCHE

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Please see back cover.

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the BactrimTM 3-system counterattack



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The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of

Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has *no* significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

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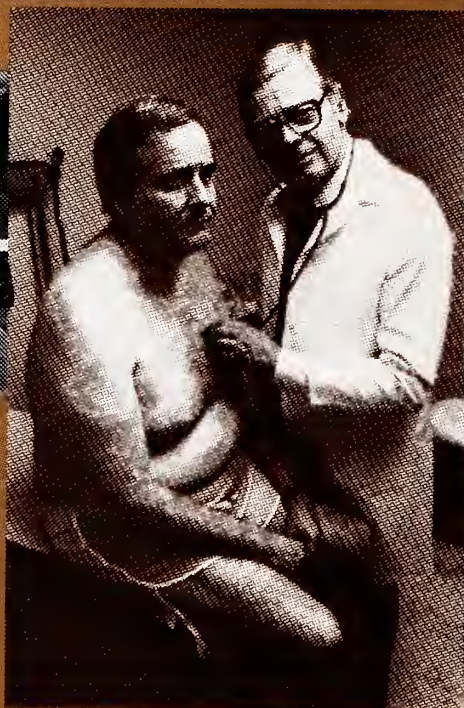
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- ☐ Proven antianxiety performance
- ☐ Minimal effect on mental acuity
- ☐ Predictable patient response
- ☐ Is used concomitantly with primary medications, such as anticholinergics and cardiovascular drugs

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5mg, 10mg, 25mg capsules

synonymous with relief of anxiety

Please see next page for summary of product information.

Librium[®] 5mg, 10mg, 25mg capsules chlordiazepoxide HCl/Roche

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction. Changes in EEG patterns (low-voltage fast activity) may appear during and after treatment. Blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral-Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d.* *Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium[®] (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. Tel-E-Dose[®] packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10. Prescription Paks of 50, available singly and in trays of 10. Libritabs[®] (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

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ABOUT THE COVER

Thanksgiving 1978 is considerably different from this European pastoral scene of 500 years ago. Exactly what is happening in this 1497 woodcut from the Reynolds Historical Library, Birmingham, escapes us, but the shepherd's life was never an easy one. History tells us that the Middle Ages were not the good old days, whatever some romanticists say.

Information For Authors Concerning Manuscripts

Manuscripts should be typewritten, double spaced on white paper 8½x11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

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Length of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct, drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

Reprints: Reprint orders should be returned at once. Prices for reprints, based on number of pages, will be furnished upon request. Communications should be addressed to *The Journal of The Medical Association of The State of Alabama*, P.O. Box 1900-C, Montgomery, Alabama 36104. Telephone 263-6441, Area Code 205. ●

FROM THE EXECUTIVE DIRECTOR

A Universal Language

A major problem in every profession is standardization of terminology. Unless there is a common language that all understand, the result is confusion, lost time, and excess costs.

Nowhere is this more evident in the medical profession than in the physician's relations with third-party payors. They pay according to the book and if your terminology isn't in their book, you are either hassled until you do it their way or you don't get paid.

But there is a common language here too, one that is rapidly gaining acceptance. Physician Current Procedural Terminology, CPT for short, has long been fostered by the American Medical Association as the Esperanto, or universal language, of medical terminology.

CPT-4, latest edition of that effort, is now available, from MASA or the AMA. Procedures or services use the five-digit code, with the first two digits describing the part or the body or system involved, the last three what was done.

Handily indexed and indisputably logical in its arrangement, CPT-4 is easily understood by man or machine — or, more precisely, woman or computer, since this is the partnership that has pretty well taken over commercial transactions in America.

Blue Shield of Alabama has now gone to the CPT system, as has Medicaid. Medicare remains a hold-out, but it will likely come around. Other insurance companies are likewise moving to CPT.

Interest in Alabama is obviously snowballing. Shortly after our first offering of the reference in *The Alabama M.D.*, more than 100 orders from state physicians poured in. Plainly, it is an idea whose time has come.

It is available from MASA for \$10 or from the AMA for \$12.

I believe it will do much to bridge the communication gap that sometimes exists between physicians and third-party payors.

More importantly perhaps, it will greatly facilitate your office's service to your patient, expediting claims by the simplest, most foolproof method yet devised.



S. Lon Conner

COMPATIBILITY



Does it influence your choice of a peripheral/cerebral vasodilator*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

*Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows

Possibly Effective

- 1 For the relief of symptoms associated with cerebral vascular insufficiency
- 2 In peripheral vascular disease of arteriosclerosis obliterans, thromboangitis obliterans (Buerger's Disease) and Raynaud's disease

Final classification of the less than effective indications requires further investigation

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg and 20 mg
Vasodilan injection, isoxsuprine HCl, 5 mg, per ml

Dosage and Administration: Oral: 10 to 20 mg, three or four times daily
Intramuscular: 5 to 10 mg (1 or 2 ml) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding

Parenteral administration is not recommended in the presence of hypotension or tachycardia

Intravenous administration should not be given because of increased likelihood of side effects

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted

Administration of single dose of 10 mg intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg are not recommended. Repeated administration of 5 to 10 mg intramuscularly at suitable intervals may be employed

Supplied: Tablets, 10 mg, bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg, bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg per 2 ml ampul, box of six 2 ml ampuls

U.S. Pat. No. 3,056,836

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(ISOXSUPRINE HCl)
20-mg tablets

Mead Johnson PHARMACEUTICAL DIVISION

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QUIBRON[®]

Each capsule or tablespoon (15 ml) elixir contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg. Elixir, alcohol 15%

- theophylline for effective around-the-clock bronchodilator therapy
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Indications: For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.

Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.

Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e. clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 µg/ml.

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Thanksgiving 1978

Hiliary H. Henderson, Jr., M.D.
President



Thanksgiving begins what in this country has come to be called rather vaguely "the holidays." The holidays continue through New Year's Day, and, according to some customs, even beyond that.

Thanksgiving itself is rich in American tradition. Although people in other countries have special days set aside for thanks, ours is unique in at least one way: our forefathers had found a new land.

Looking back these many years later, we like to think that was uppermost in their minds. But it probably wasn't. More likely, they were thankful just to have survived, and many of them didn't.

Thanksgiving 1978 finds a nation all but oblivious to the gratitude that came then from having received no more than the basic necessities of life. We are no longer grateful, I'm afraid, for food, shelter and clothing. Long years of relative peace and prosperity have left Americans troubled by only the desire for more and more, better and better.

This is not altogether bad, of course. Wanting more and better made America the greatest nation on earth. And this is, after all, the fundamental motivation of our free enterprise system.

But something essential seems to have changed. At times it appears that the famous American drive, the ambition, has been corrupted by simple greed and, even worse, by the feeling that the world (or at least the federal government) owes everybody a living, and a good living at that.

The gimme-gimme attitude shames our forefathers, who carved a new land out of a hostile wilderness. That frontier spirit shaped our national character of initiative, self-reliance and hard work — old-fashioned virtues that seem to be going out of style.

I hope this is only a passing mood, that our people will recover that sense of faith, purpose and righteous power that our predecessors forged into our birthright. We can forsake that proud heritage only at our peril.

In any case, this is a joyous occasion, to which prophets of doom and gloom are not welcome. I wish all of you a happy Thanksgiving, followed by whatever number of other partial "holidays" you can squeeze out of a busy practice.

Hiliary H. Henderson Jr.



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A Strategy For Control

Prescription Blanks In Group Practice

by LEON C. HAMRICK, M.D.*

Prescription forgery for narcotics, amphetamines, and barbiturates—an inconvenience, a concern, a headache, and a problem.

Here's how one clinic met the problem with success!

In 1974, the Lloyd Noland Hospital and Clinic, located in Fairfield, a suburb of Birmingham, became concerned over the number of forged and bogus prescriptions showing up in the metropolitan area of Birmingham and Jefferson County.

While not all of the prescriptions bore the Lloyd Noland Clinic legend, some did; and concerned members of the clinic resolved to halt misuse of stolen clinic prescriptions to obtain class II and IIN drugs.

Not aware of the system described by Rapp and Johnson in the *JAMA*¹ a similar plan was devised for our institution.

All prescriptions of the type then in use (Figure 1) were collected from all hospital and clinic areas and their use discontinued; simultaneously, prescription pads (Figure 2) to be used for all but class II and IIN drugs were distributed to the nursing stations in the hospital and to the physicians' offices.

Pads of 100 pink-colored prescriptions (Figure 3) previously printed and serially numbered by the printer were placed in control of the pharmacy. One of these pads, with recording of the inclusive serial numbers, was issued to each hospital nursing station by the pharmacist. The nurses were directed to exercise control of these individually numbered prescriptions in the same manner as they handle controlled drugs. The physicians were instructed that when the need arose to write a prescription for a class II or II N drug for a patient being released from the

hospital, a blank was to be requested from the nurse who then would obtain it for the physician from the locked narcotics cabinet.

Similar pads of these serially numbered pink-colored prescriptions were

issued to each physician, by the pharmacists, for use in prescribing class II and II N drugs in his office. The safekeeping of these was charged to the individual physician; to emphasize this, the physician was made aware

129

FOR _____ DATE _____

ADDRESS _____

R

DRUGGIST
LABEL NAME & STRENGTH ☐

REFILL X 1, 2, 3, 4, 5, - 6 MO. ☐ PRN

DO NOT REFILL ☐

REG NO _____ LLOYD NOLAND CLINIC M D

Take this prescription to the druggist of your preference.

FIGURE 1.

129

FOR _____ DATE _____

ADDRESS _____

CAUTION NOT VALID FOR CLASS II
AND IIN DRUGS

LABEL NAME & STRENGTH
UNLESS CHECKED HERE ☐

R

REFILL X 1, 2, 3, 4, 5, - 6 MO. ☐ PRN

DO NOT REFILL ☐

DEA NO _____

STATE REG NO _____ LLOYD NOLAND CLINIC M D.

Take this prescription to the druggist of your preference.

FIGURE 2.

1. Robert Rapp, PharmD, and Curtis Johnson, RPh, Letter to the Editor, *JAMA*, April 22, 1974, Vol. 228, No. 4, 462.

Prescription Blanks A Strategy For Control

that the inclusive numbers of the prescriptions on the pad were being recorded in his name.

Subsequent need for prescriptions has been carried out in the same manner. No problems have been encountered in the control or safekeeping of the prescriptions.

As a helpful guide, the below list of

the more commonly prescribed class II and II N drugs was included in the information distributed to the physicians and nurses concerning the change in prescription usage.

Since the inauguration of this method of handling prescriptions, more than three years ago, only one incident of an attempt to pass a forged prescription on a prescription bearing this clinic's legend has been reported or brought to our attention. The reporting pharmacist had readily noted that a prescription for a class II drug had been written on one of the restricted prescriptions not good for class II.

The change in prescribing has been well received by the physicians; and appreciative comments have been heard from pharmacists in our area.

Any minor inconvenience caused by this method of prescription control is far outweighed by the prevention of drug diversion and the security of peace of mind.

Individual Practitioner Application

Modification of this system for use in the individual practitioner's office could be done relatively easy by having available restricted prescriptions for desk use (see Figure 2) and by having separate nonrestricted prescriptions for Class II and II N Drugs placed in security under lock accessible only to the physician or to the physician through his nurse from the narcotic safe or lock box.

Extension to hospitals through medical staff action would also be feasible by asking the hospital administrator to have available at the nurses' station both restricted and nonrestricted prescriptions; the restricted prescriptions could be readily available to the physician through the station nurse or clerk, while the nonrestricted prescription would be kept under locked control with the nursing station's narcotics and made available to the physician for writing Class II and II N prescription as described.

*Part of Dr. Hamrick's article originally appeared in Group Practice, May-June 1978, and is reprinted by permission. Dr. Hamrick is Medical Director of Lloyd Noland Hospital and Chairman of MASA's Board of Censors.

Take this prescription to the druggist of your preference.

129-A-11-74
FOR _____

ADDRESS _____ DATE _____

19525

R

DRUGGIST
LABEL NAME & STRENGTH ☐

REG NO _____ M D _____

LLOYD NOLAND CLINIC

FIGURE 3.

Class II and II N Drugs Commonly Prescribed

Analgesics

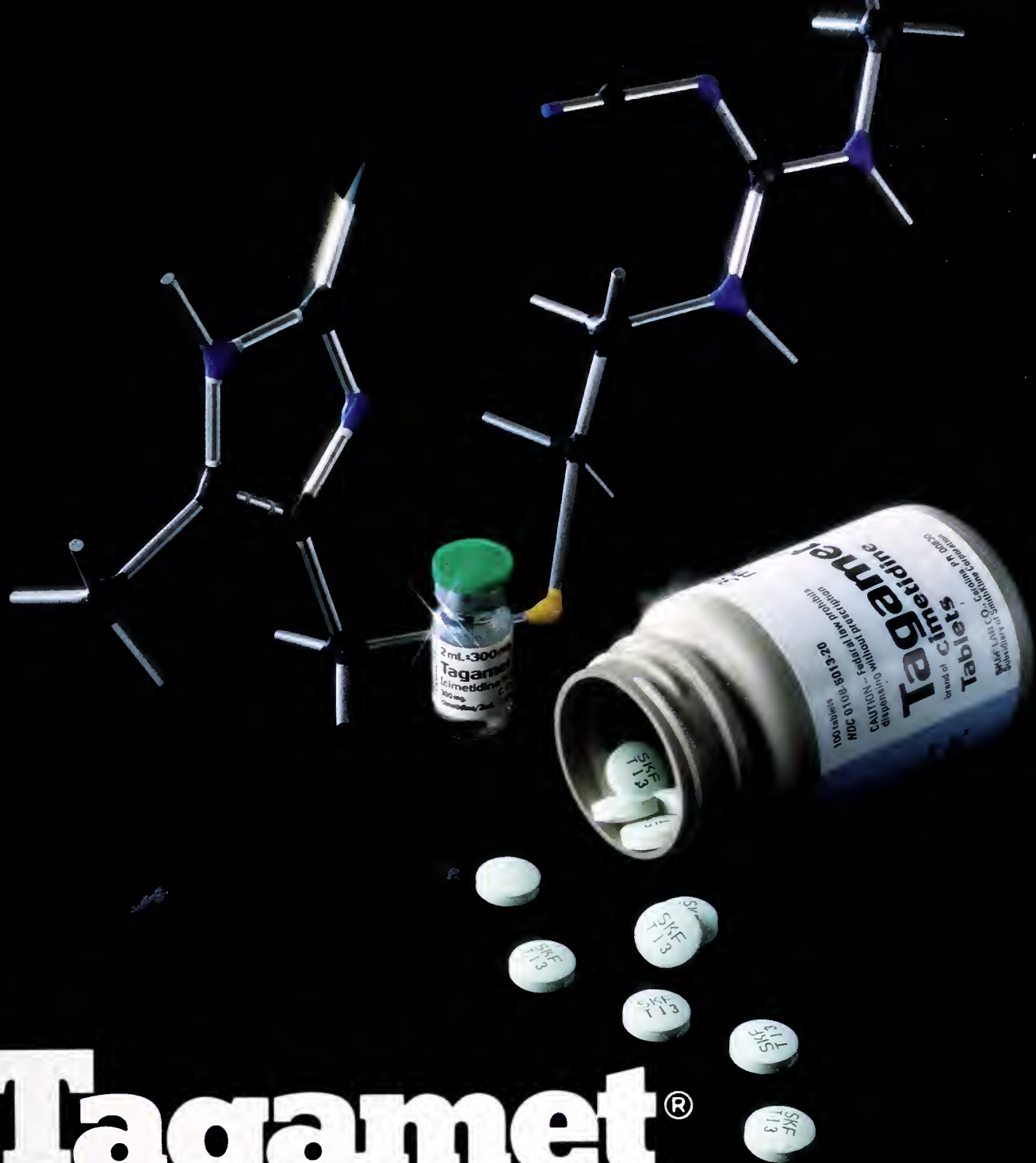
Codeine
Demerol
Dilaudid
Dolaphine
Hycodan
Hydromorphone
Leritine
Levodromoran
Mepergan
Methadone
Morphine
Numorphan
Opium (all forms)
Pantopan
Percodan
Perobarb
B & O Suppositories

Stimulants

Benzadrine
Biphetamine
Desophen
Desoxyn
Dexamyl
Dexadrine
Dextroamphetamine
Eskatrol
Obedrin
Preludin
Ritalin

Barbiturates

Amobarbital
Amytal
Donnagesic No. 2
Nembutal
Pentobarbital
(except suppositories)
Secobarbital
(except suppositories)
Seconal
(except suppositories)
Sodium Pentobarbital
Tuinal



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brand of

cimetidine

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Injection, 300 mg./2 ml., in single-dose vials in packages of 10.

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**When painful spasm
is the presenting
symptom...**



... in functional G.I. disorders*

Bentyl[®]

(dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity
with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup Injection
AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS

For use as adjunctive therapy in the treatment of peptic ulcer. IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and or other information, FDA has classified the following indications as "probably effective."

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders) and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis), paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with autonomic neuropathy, hepatic or renal disease, ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon, hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension, hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and, or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg capsule and syrup. Adults: 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children: 1 capsule or teaspoonful syrup three or four times daily. Infants: 1/2 teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. Adults: 1 tablet three or four times daily. Bentyl Injection: Adults: 2 ml (20 mg) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1976

Merrell

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Division of Richardson, Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.



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Nutrition Support Service

A New Program In Human And Clinical Nutrition At U.S.A.

Robert M. Suskind, M.D.*

One of the major deficits in the training of medical students and house staff is in the nutritional care of patients. In spite of the fact that several studies have determined that up to 50% of hospitalized patients have varying degrees of protein-calorie malnutrition, little has been done to develop an effective, coordinated nutritional program to combat these deficits. Patients with diseases such as congenital heart disease, cystic fibrosis, chronic renal disease and cancer often develop secondary nutritional deficits.

As a result of the combined nutritional interests of Dr. Robert Suskind, recently appointed Professor and Chairman of Pediatrics, Dr. Robert Kreisberg, Professor and Chairman of Internal Medicine, Dr. Arthur Donovan, Professor and Chairman of Surgery, and Dr. Charles Baugh, Professor and Chairman of the Department of Biochemistry at the University of South Alabama, the University of South Alabama College of Medicine has the unique potential for developing an effective program in Clinical and Human Nutrition which will focus on the nutritional problems of patients seen and cared for at the University Hospital.

The program in nutrition will be centered around the activities of a Nutrition Support Service. The service will be established to:

- 1) Improve nutritional care of hospitalized and ambulatory patients;
- 2) Introduce within the hospital setting a program responsible for the nutrition education of house staff, medical students and dietitians;
- 3) Initiate and stimulate research in the field of Clinical Nutrition;
- 4) Act as a model for other institutions for introducing nutrition as a subspecialty within the field of medicine.

Patient Care

With the development of total parenteral nutrition and defined formula diets, it is now possible to nutritionally support most hospitalized and ambulatory patients. It has only been with the development of these relatively new techniques for providing nutritional support that one has been able to use nutrition to help reverse the clinical course of patients with such diseases as acute and chronic renal failure, liver failure, pancreatitis and inflammatory bowel disease. Nutritional support has also been used successfully as an adjunct to primary chemotherapy in cancer patients.

The goal of a hospital-based Nutrition Support Service will be to provide a multidisciplinary approach to solving

the nutritional problems that arise in the hospital. In addition to monitoring parenteral nutrition (TPN) within the hospital, the Nutrition Support Service will be responsible for consulting on hospitalized patients with a wide variety of nutritional problems, and for providing out-patient nutritional support for other chronic disease patients. The Nutrition Support Service at the University of South Alabama will also be responsible for the hospital's inpatient and outpatient obesity programs. These programs will be set up to evaluate the role of behavior modification, group therapy, and exercise in the outpatient treatment of obesity.

Nutrition Education

One of the primary objectives of the Nutrition Support Service will be the training of medical students, house staff, fellows and senior staff as to the important role played by nutrition in patient care. This will be accomplished through ward rounds, teaching rounds, seminars and conferences. Senior staff and fellows will teach both house staff and medical students clinical nutrition which will then be applied to the care of their patients. In addition, professors from the Department of Biochemistry and other departments throughout the University will present conferences in nutrition and metabolism.

While a great deal is known about experimental nutrition, human nutri-

*Professor and Chairman, Department of Pediatrics, University of South Alabama College of Medicine

Dean's Report

CONTINUED FROM PAGE 15

tion and public health nutrition, very little of this information has been transmitted to the medical students or house staff because there are so few well-qualified clinicians with expertise to teach nutrition at the bedside. Within this program, fellows in clinical nutrition who will be the future professors of clinical nutrition in the Department of Pediatrics, Medicine and Surgery will be trained in the principles of basic nutritional biochemistry and metabolism as it applies to patient care.

Research

As a result of the development of a nutrition program at the University of South Alabama, there will be increased activity in nutrition research as it relates to patient care. Clinical studies have already been planned in patients who have cystic fibrosis, congenital heart disease and obesity. The Nutrition Support Service will also be responsible for a nutrition laboratory which will provide support for patient care and clinical research. The development of a strong research program in nutrition should bring national and international recognition to the University of South Alabama.

Medicine and Nutrition

The development of a nutrition program centered around a Nutrition Support Service will combine the interest and activities of faculty in the Departments of Biochemistry, Pediatrics, Surgery and Medicine. Through the interaction of the basic science of Nutrition and Metabolism and its application to the bedside, activities with regard to improved patient care, teaching and research will emerge. It will be around this core of nutrition activities that the University of South Alabama will be able to develop a unique program aimed at the improved teaching of the medical students and house staff in the area of nutrition and metabolism. Improved patient care will emerge when the precepts of nutrition are applied to daily medical care.

The fellows who are in training within the context of the Nutrition Program will receive certification after two years of training. They will then be eligible for the Boards in Human and Clinical Nutrition. In addition, future plans will include the development of a Ph.D. program which will involve the fellows taking basic courses in nutritional biochemistry and metabolism, statistics and human nutrition.

The University of South Alabama is one of the two "full service" medical schools in the State. As a result of the interest in nutrition on the part of the faculty of the Department of Medicine, Surgery, Pediatrics and Biochemistry, the development of a program in Nutrition, focused around the Nutrition Support Service, will lead to a more concentrated, productive service, teaching and research programs in this area. With the development of a nutrition program for the medical school, the University of South Alabama will have a unique opportunity to develop an area which is of significance to the well-being of the people in the State of Alabama and the world.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

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ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

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Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

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Karen Zupko, Director
Department of Practice Management
Division of Medical Practice
American Medical Association

MANAGEMENT CONSULTANTS: RX FOR AN AILING PRACTICE

Thinking of incorporating your practice? Personnel problems getting you down? Setting up a pension or profit-sharing plan? Getting seemingly contradictory advice from your attorney, accountant, broker, and insurance man? Well, maybe it's time for you to find a medical management consultant.

Professional medical management consultants come from a variety of backgrounds—law, accounting, and business. Most consultants are organized into firms, and individual consultants, like physicians, most often have specialties. But the key thing to remember is that these management advisers specialize in serving physicians and dentists and are well acquainted with the business side of medical practices.

What can you expect in the way of advice and assistance? Firms vary, but most offer services in three broad areas: practice management, personal financial management, and accounting and taxes.

Having a consultant doesn't mean that you won't need the services of an attorney, accountant, or architect. But if you include your consultant in discussions with your other advisers you will have the benefit of a valuable second opinion.

Think of it this way: if your business affairs need "doctoring," a medical consultant is like the family practitioner who can take care of most ailments. And like a family doctor, they will refer you to a specialist if you need one. Specifically, you can expect assistance in office design, accounts receivable management, tax, personnel hiring, training, and policies, big equipment, purchases, and the like.

Fees vary with the time and effort to do what you ask. Few bill on a daily rate basis anymore. Most charge between \$50.00 and \$100.00 an hour and that includes travel time to your office and the time it takes to write reports. Rates for a complete practice survey range between \$400 to \$1,600 depending on your type of practice. Most consultants will offer to quote a fee before taking you on as a client, but if they don't, be sure to ask. You should also know that most consulting firms don't accept fees or commissions from suppliers, pharmaceutical companies, insurance companies, or other commercial interests.

Qualifications?

After several years of experience, management consultants can voluntarily join a professional society and this

is one way you can check their credentials. These societies establish ethical standards for members and provide continuing education courses, which is as important for them as it is for you.

If the consultants you contact have "C.P.B.C." after their names, this means they have passed a comprehensive written examination on various aspects of practice and financial management. Nearly 100 medical management consultants in the U.S. (of approximately 500 in business) have passed the test, which is administered by the Institute for Certified Professional Consultants.

To find a medical management consultant in your area, you can contact one of the professional societies listed below. They will refer you to local members. After you get the names, call and talk with one or two before committing yourself. Your search for a consultant is like a patient looking for a doctor — it pays to check around.

National societies for professional medical management consultants are:

Society of Professional Business Consultants (SPBC), 221 North LaSalle Street, Chicago, IL 60601, (312)245-1862; Society of Medical-Dental Consultants, 6100 Golden Valley Road, Minneapolis, MN 55422, (612) 544-2612.

Robert Hooke: Forgotten

If the name of Robert Hooke is not today a household word, at least as familiar as that of Isaac Newton, there is a reason.

They were contemporaries in 17th Century Britain and intense competitors, even at times bitter rivals.

No age can afford more than one great man in any field; history gave that accolade to Newton, who deserved it, and denied it to Hooke, who was in many ways far more versatile as a scientist, who anticipated some of Newton's laws, first coined the word "cell," made a wide variety of scientific instruments without which medicine and research would have remained at a standstill — who did so much for medicine, in fact, that 10 years before his death, the M.D. degree was conferred on him by warrant from the Archbishop of Canterbury.

As Curator of Experiments for the newly incorporated Royal Society, Hooke served for 41 years, until his death in 1703, as the greatest experimenter of his age.

Master of Many Trades

Virtually no field escaped his interest. He designed the anchor escapement which made modern time-keeping possible, lifted navigation from primitive guesswork to a precise science, invented the science of meteorology, perfected the Gregorian telescope, improved the microscope and contributed the greatest single work on its use at that time, *Micrographia*, to a fascinated scientific world.

He devised a system of telegraphy. As an anatomist, he first sustained life in a dissected dog by a system of bellows. The line that led to the steam engine passed directly through him. He

made notable contributions to mathematics, physics, geometry, anatomy, navigation, biology, astronomy; was first to state the law of inverse squares; and prefigured Darwin with his probing questions about species and the doctrine of creation.

How could a man with such a wide variety of interests, who was first in so many things, have been eclipsed by a comparatively narrow specialist like Newton? Perhaps for that very reason: Newton stuck to his last, perfecting his laws and theories as a life work, whereas Hooke never tarried long on any of a diverse variety of experiments and inventions.

He was very likely the most plagiarized and purloined scientist and inventor in history, unless it can be argued that more was stolen or borrowed from the copious notebooks of Leonardo da Vinci.

Upstaged and Outshown

To state it another way: in the vibrant 17th century Britain, Hooke was the brightest moon, but Newton was the sun. In any other time, Hooke, for the sheer brilliance of his achievements in so many fields, would have ranked with the immortals.

For 40 years after death, he was a prophet honored and remembered in his own land, but then silence fell for two centuries. Only very recently has the full measure of his achievements become appreciated in their historical context.

Most school boys can remember Hooke's law of elasticity (the British, more succinctly, call it the law of spring), but hardly a jot more than that about a man who had lasting impact on scientific technology,

theory and practice. Boyle's law is even more familiar, and Boyle was another contemporary in that exciting period of scientific ferment.

If ever there was a man for all seasons, Hooke was it. In total accomplishments, he may have been the greatest mechanical scientist of all time, but he might also have ranked with the premier architects and builders had he not been overshadowed in that second career by the gifted Sir Christopher Wren.

Rebuilding London

Ask anyone who it was who rebuilt London after the great fire of 1666 and if he knows anything about it at all he will say Wren. Ask one who knows *much* about it and he will say Hooke and Wren, for many of the great buildings in that intense period of restoration were Hooke's, although credited to Wren.

Hooke seemed only once in his life to have really cared that someone else got the credit for his work.

That was in his estimable career as a clockmaker. By 1660, Hooke had solved the two major problems of accurate time-keeping, overcoming the effect of gravity on the time-keeper and replacing the old inaccurate verge escapement. He developed the modern anchor escapement and the spiral balance-spring, two of the single most important developments in horology.

In 1674-75, the watchmaker Henry Oldenburg attributed to Christiaan Huygens the new invention of the spiral spring applied to the balance to regulate the movement.

Oldenburg had a vested financial interest. Huygen had offered him the English patent rights. Hooke could

Genius

take no more theft, angrily protesting his invention was perfected, as it had been, 17 years before.

Hooke was confident he had proof of his priority in the records of the Royal Society, to which his paper had been read in 1660. That would have been irrefutable, accepted as such. But the keeper of those records was none other than Oldenburg; the definitive notations were never found.

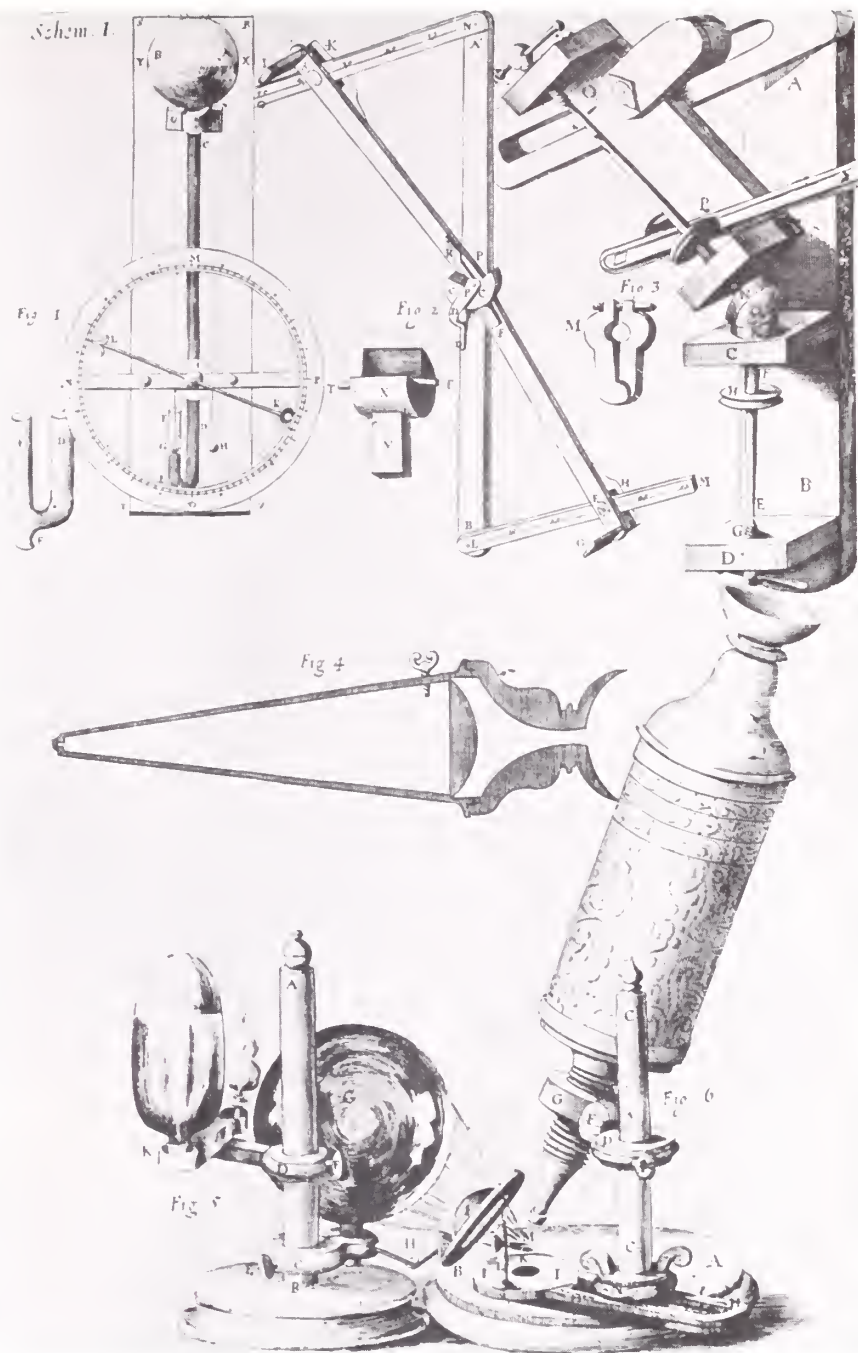
Hooke had been taken again, and this time it hurt, not least because he could have profited by a commercially useful product, so unlike many of his inventions of instruments and devices of use primarily in science, like the vacuum pump.

Not only had Hooke invented that spiral spring, he had first enunciated the law of spring, or elasticity.

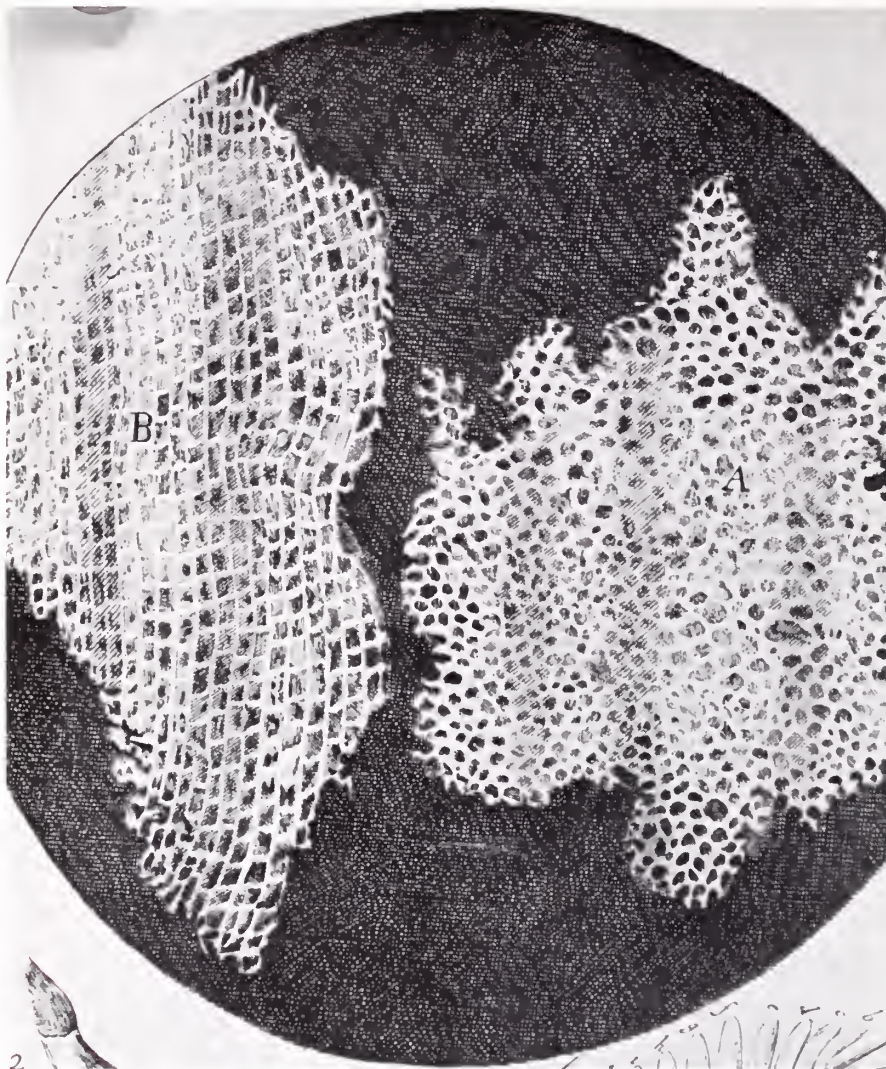
He could have made a mint on his invention of the universal joint, without which many cars wouldn't function today, but it had use then mainly in watches and dial instruments; or the iris diaphragm for telescopes, not to be used in cameras for some time; or the wheel barometer; or the "weather-clock," which recorded for the first time hour-by-hour changes in pressure, moisture, temperature, wind direction and precipitation, making him the first meteorologist.

If Hooke questioned the biblical story of creation before Darwin, he didn't make a fuss. He was, after all, a quiet, contemplative man who spurned controversy. Nor did he make a big thing of it when he conceived the laws of planetary motion, which would have been anathema to the orthodox theologians of the day with their geocentric dogma.

PLEASE TURN PAGE



A page illustrating some of Hooke's scientific inventions.



Robert Hooke

Hooke was a spirited writer and an expert draftsman, but he was also a man of almost total candor. Where Newton deliberately veiled his theories and laws, in such works as *Principia*, in a language understandable only to the most learned mathematicians, Hooke let it all hang out so that everyone could understand. His joy of discovery was boundless and his greatest satisfaction in sharing.

Newton wanted only a few to understand that he was dead right; Hooke wanted to be useful, as he was in such an immense variety of ways it is difficult to cite his equal.

How could the seafaring nation of Britain have spread the flag of empire without Hooke's contributions to navigation, including methods for determining longitude or at sea, or his significant contributions to King Charles's establishment of the Royal Observatory at Greenwich?

If the Royal Society was Newtonian, or to become so after Hooke's death when Newton became President (as he couldn't have while Hooke lived), it was, first and last, Baconian. The great Sir Francis had laid down general statements about the aims and methods of modern science that had become holy writ in the pre-Newtonian period.

Hooke's Hallmark

The mark of quality was on everything Hooke did; on every experiment he performed, covering almost the

MICROGRAPHIA.

II

curious, but that possibly, if I could use some further diligence, I might find it to be discernable with a *Microscope*, I with the same sharp Pen-knife, cut off from the former smooth surface an exceeding thin piece of it, and placing it on a black object Plate, because it was itself a white body, and casting the light on it with a deep *plano-convex Glass*, I could exceedingly plainly perceive it to be all perforated and porous, much like a Honey-comb, but that the pores of it were not regular; yet it was not unlike a Honey-comb in these particulars.

First, in that it had a very little solid substance, in comparison of the empty cavity that was contain'd between, as does more manifestly appear by the Figure A and B of the XI. *Scheme*, for the *Interstitia*, or walls (as I may so call them) or partitions of those pores were neerer as thin in proportion to their pores, as those thin films of Wax in a Honey-comb (which enclose and constitute the *sexangular cells*) are to theirs.

Next, in that these pores, or cells, were not very deep, but consisted of a great many little Boxes, separated out of one continued long pore, by certain *Diaphragms*, as is visible by the Figure B, which represents a flight of those pores split the long-ways.

I no sooner discern'd these (which were indeed the first *microscopical* pores I ever saw, and perhaps, that were ever seen, for I had not met with any Writer or Person, that had made any mention of them before this)

Hooke drew this sketch (top photo, page 22) of the section of cork he was studying when he first hit upon the idea of "cells," the word he used to describe the "little boxes" he saw. (Bottom photo, page 22) The first use of the word may be seen on lines 14 and 15 of this page from the text of "Micrographia," published in 1665.

whole range of human inquiry at that time; on every instrument and device he perfected in the very origins of modern science and medicine.

He was sometimes badly treated because of his generosity; he gave most of his ideas away, or so saw them appropriated by opportunists. Much of what he discovered entered the mainstream of science without attribution or was wrongly attributed to others.

Only the "Huygens spring" seemed to have bothered him.

He would scarcely have cared that his career as one of the two major London architects after the Great Fire is honored chiefly for his design of Bedlam Hospital.

He was possessed of demonic energy, which may have been his undoing if success is measured materialistically or by appropriate references in the books. He was interested in too many things, his talents too diverse, to remain on one subject long.

Still it would not do him justice to call him a scientific dilettante, since he greatly advanced and improved knowledge in every field he entered. Perhaps it's fairest to say that he remained a gifted amateur, never turning pro, until he died. □

References

1. "Robert Hooke," Margaret McP.W. 'Espinasse, William Heineman, Ltd., London, 1956; University of California Press, Berkeley, 1962.
2. General texts.

TO THE KING.

SIR,

I Do here most humbly lay this *small* Present at Your Majesties Royal feet. And though it comes accompany'd with two *disadvantages*, the *meanness* of the *Author*, and of the *Subject*; yet in both I am *incouraged* by the *greatness* of your *Mercy* and your *Knowledge*.

greater Designs, I here presume to bring in that which is more *proportionable* to the *smallness* of my Abilities, and to offer some of the *least* of all *visible things*, to that *Mighty King*, that has *establisht an Empire* over the best of all *Invisible things* of this *World*, the *Minds* of Men.



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Across the street, the renowned Egyptian Museum of Antiquities is bursting with relics from its collection covering six thousand years, highlighted by the riches of the King Tutankhamun tomb.

In the distance, great pyramids rise on the horizon at the edge of the desert. See the great Sphinx standing guard over the tombs of ancient kings where the green Nile oasis meets the desert at Giza, or ride a camel to the

pyramid of Cheops for a closer look at the Pharaohs' burial chamber.

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- Rhodes — one of Greece's most charming islands. Here you'll find New Town, smartly contemporary, and Old Town, teeming with bargains. Walk its historic sites and enjoy its medieval atmosphere! Until 677 A.D., the huge Colossus of Rhodes guarded this harbor. Nearby Lindos offers the Acropolis, 1000 feet above the sea — a spectacular sight and photographer's delight.

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Editor, The Journal

I have noted Dr. Robert L. Baldwin's article entitled, "Where Have All the Artists Gone?" in the July 1978 issue of the *Journal* of the Medical Association of the State of Alabama. My eye was attracted particularly to the final paragraph in which he says, "...Let's give back the heart-lung machines; throw away all the computers, dump protocols and the statistical rubbish they produce...."

While there is much that I agree with in Dr. Baldwin's interesting article, I don't agree with the implication that the use of scientific methods and modern technology is incompatible with artistry and compassion for the patient. Indeed, I am completely committed to the concept that the artistry of medicine and surgery, and our compassionate desire to be of warm *but effective* service to the patient demand our use of the most precise and modern methods available.

Often this involves computers, protocols, statistics, and even on occasions, heart-lung machines. I strongly suspect that our patients, if fully informed, would demand considerably more from us than artistry and compassion. They demand that, of course, and rightfully so. But, I believe they also demand results.

Would Dr. Baldwin really wish to go back to the day when all that could be said of the doctor was that "he sat-up all night with Granny, while she died"?

John W. Kirklin, M.D.
Professor and Chairman, Surgery
UAB Medical Center, Birmingham

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Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially, increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression, suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants, causal relationship not established

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Diagnosis And Treatment Of Diabetes Mellitus

Buris R. Boshell, M.D.*

Diabetes mellitus is now our most important metabolic disease. It involves at least 5% of the population and its prevalence is steadily increasing. Six hundred thousand new cases occur annually in the United States; thus the prevalence is doubling every fifteen years¹.

Diabetes mellitus is the most common cause of irreversible blindness, the most common underlying factor in accelerated vascular disease and the third leading cause of death². Each year, diabetes costs the economy of this country at least \$6 billion in terms of loss of work, medical charges, etc.³

Although five or six Nobel prizes have been awarded to investigators involved in diabetes or diabetes related research, we still do not actually know what diabetes is, how insulin works at the molecular level or the precise etiology of diabetic complications.

There is a general consensus among experts in the field that what we now know as diabetes mellitus is a variety of diseases or conditions all cloaked under the umbrella of hyperglycemia. Thus it is reasonable to suspect that in subsequent years we will subclassify diabetes on the basis of etiology, much as the common disease, pneumonia, has been divided, i.e. pneumococcal pneumonia, coxsackie viral pneumonia, etc. We will then speak of diabetes in the terms listed in Table 1 rather than as juvenile onset diabetes, maturity onset diabetes or maturity onset diabetes of youth as we now classify the disease.

Diabetes is, by definition, a relative or absolute lack of insulin. From the standpoint of diagnosis, however, we will depend on an indirect method, the oral glucose tolerance test. Ideally the oral glucose tolerance test should be performed in the early morning following an overnight fast. The patient should eat a 2500 to 3000 calorie diet high

in carbohydrate for at least three days preceding the test; however, as long as the individual has consumed a minimum of 1500 calories per day it is unlikely that a truly normal test will become abnormal. The glucose tolerance test should be performed by giving the patient (adult) 75 gm of glucose dissolved in 300 ml of chilled water. This should be consumed over a period of 5 minutes. Blood for glucose determination should be drawn fasting and each half hour for a total of three hours. Normal values for whole venous blood are less than 160 mg/ 100 ml during the first hour, less than 140 at one and one-half hours and less than 120 at two hours. If plasma or serum is used, these values should be increased by 15%, as plasma and serum glucose values are 15% higher than whole blood when the hematocrit is within normal range.

Several factors are known to adversely influence the glucose tolerance test, i.e., decrease the tolerance of the patient for glucose thereby causing spuriously high values. These factors include:

1. Age (Increases the one hour value by approximately 13 mg% and the two hour value by 7 mg%)
2. Pregnancy
3. Oral contraceptives
4. Thiazide diuretics
5. Cortisone
6. Bedrest or decreased activity in general
7. Stress (This may be an illness such as a stroke, myocardial infarction, etc. or it may be emotional stress)
8. Starvation
9. Intestinal shunts
10. Liver disease
11. Other endocrinopathies such as pituitary or adrenal tumors adrenal hyperplasia.

Generally speaking, the glucose tolerance test should not be performed within less than one month following a severe illness or less than 48 hours after the discontinuation of diuretics. The adverse effect of oral contraceptives, cortisone, etc., may last much longer. Therefore, two to four weeks should elapse after discontinuation of therapy with these agents before the glucose tolerance test is performed.

The ingested glucose is pooled and mixed in the

*Director, Diabetes Research and Training Center, Medical Director, Diabetes Research and Education Hospital, Director, Division of Endocrinology and Metabolism, Ruth Lawson Hanson Professor of Medicine, University of Alabama in Birmingham, Birmingham, Alabama.

**CLASSIFICATION OF DIABETES MELLITUS
FUTURISTIC
BASED ON ETIOLOGY**

Juvenile onset:

1. Viral
 - a. Mumps
 - b. Coxsackie^{4,3,2,1}
 - c. EMC
2. Simple autoimmune
3. Traumatic
4. Simple genetic
5. Miscellaneous

Adult Onset:

1. Simple genetic, i.e., insulin deficiency
2. Tissue resistant
 - a. Quantitative decrease in receptors
 - b. Low receptor affinity
 - c. Circulating receptor antibodies
3. Stress
 - a. Hormonal
 - b. Other
4. Miscellaneous

Table 1

Diabetes

When the glucose absorption begins and the blood glucose begins to rise, insulin secretion is stimulated whereas growth hormone and glucagon secretion are suppressed. As the glucose utilization and/or storage exceeds absorption, the blood glucose begins to fall. This activates the prospective orchestra of glucagon, growth hormone, epinephrine, etc. that apply the brakes and prevent serious hypoglycemia. Hopefully in the near future we will understand more fully the true etiology of diabetes mellitus and will therefore have more specific diagnostic tests than is the oral glucose tolerance test.

Treatment of diabetes remains highly controversial. Proponents of the Tolstoi school⁴ essentially aim at keeping the patient out of ketoacidosis without regard to glycosuria and the specific level of blood glucose. This school of thought is being largely overshadowed by the proponents of Joslin⁵ who point out that more and more studies are demonstrating a relationship of diabetic complications to insulin deficiency and hyperglycemia^{6,7,8}.

The philosophy of the staff of the Diabetes Hospital at the University of Alabama in Birmingham (UAB) is to achieve as nearly normal blood glucose levels as possible without producing hypoglycemia to any significant degree. We try to achieve control of blood glucose levels at 150 mg% or less in the fasting and three hour postprandial state. Glycosuria should be less than 10 gm/d as determined by the clinitest two drop technique.

We collect four pools of urine from each patient daily while they are in the hospital and use this information along with the blood glucose pattern to regulate the patient. The urine pools are collected from bedtime to breakfast, breakfast to lunch, lunch to supper, and supper to bedtime. Blood sugars are drawn fasting, mid-morning, mid-afternoon and at bedtime. We attempt to keep the glycosuria to less than 4 gm/pool and less than 10 gm/24 hours. Our goal is to keep the blood glucose levels less than 150 mg% and to provoke hypoglycemia as little as possible.

Our initial approach is to try diet alone if the patient is not ketoacidosis prone. The diet is calculated for each patient based on 30 calories/kg ideal body weight. If it is obvious that insulin is

stomach and released via the pylorus into the duodenum in a peristaltic manner. Interruption of this relationship by procedures such as subtotal gastrectomy and gastrojejunal shunting floods the small bowel with glucose and causes rapid absorption with resultant alimentary hyperglycemia, i.e. blood glucose of more than 160 mg% during the first hour and a physiological rebound hypoglycemia during the first through the third hour of the test. On the other hand, such conditions as pyloric stenosis prevent the glucose from reaching the small bowel and result on a flat glucose tolerance test.

Glucose entering a normal small bowel is absorbed at a rate of approximately 1 gm/kg of body weight/hour. Thus the average 70 kg man absorbs the 75 gm used in glucose tolerance testing in approximately one and one-half hours. The glucose is then distributed in a liquid pool equal to about one-third of the body weight, i.e. the extracellular fluid plus the intracellular fluid of tissues such as brain and liver that do not require insulin for glucose transport. Normally, approximately two-thirds of the glucose load is taken up by the liver and one-third presents to the periphery. These fractions are reversed in diabetes and in obesity.

essential, we begin with approximately two units of NPH insulin and two units of regular insulin before breakfast and before dinner. Regular insulin is then given every two to four hours until we have a general idea of how much insulin should be given in the two shots per day regimen. Generally, about two-thirds of the total dose is given before breakfast and one-third before supper. This, however, is tailored for each patient based on the objective information obtained from the urinary and blood glucose values. Once the renal threshold has been determined to be relatively normal, blood glucose patterns can be discontinued and regulation can be based on the quantitative and spot (second voided specimen determined before each meal and at bedtime) urinary test results. (See Table 2, Page 32)

Most patients who are on insulin at the time of admission to the Diabetes Hospital are found to be over insulinized and are therefore frequently labile and brittle. This can be changed by reducing the insulin dose slowly in an objective manner. The primary objective is to make changes by no more than two to four units at a time unless the situation demands differently.

The key difference in the Diabetes Hospital and a general hospital is the availability in the Diabetes Hospital of an intensive educational program and a team of physicians, nurses, dietitians, and teachers who are trained and devoted to excellence in diabetic care. Closed circuit television programs, teaching machines, manuals, group education and a one-on-one relationship between teacher and patient provides a very stimulating atmosphere for patient education.

This extensive group of highly trained individuals would probably not be economically feasible in most hospitals but constitutes the "nuts and bolts" of the Diabetes Hospital. The Diabetes Hospital is staffed and prepared to handle 200 patients per day and 40 inpatients at all times. Thus, it can serve as a consultative resource to a very large population whereby the patient attends the five-day intensive educational program and is then returned to his family physician for follow-up care. Expertise in thyroid, pituitary, parathyroid, obesity, gout, and reproductive problems is also available in the Diabetes Hospital. Four rooms are

equipped with monitors and special observation windows for handling emergency problems such as ketoacidosis or myocardial infarctions.

Current investigative programs which may significantly change therapy consist of the development of an artificial pancreas in collaboration with investigators at the Southern Research Institute, the culture of beta cells which may someday be used for transplantation and programs in neuroendocrinology which may open the door to an effective therapeutic program in obesity via chemical control of the appetite and satiety centers in the hypothalamus. This would to a large degree solve the problem of maturity onset diabetes mellitus.

Also, programs in genetics and immunology have already provided a glimmer of hope in prevention and/or control of juvenile onset diabetes. Speculation based on recent research suggests that an immunosuppressive program might ameliorate or even cure juvenile diabetes if started immediately after onset. Thus the availability of a JOD Diabetes Registry in Alabama, the only state to have such a registry, and the cooperation of our state physicians in reporting the disease is a very important beginning.

Prevention of the diabetic complications rather than treatment thereof is the key. More and more evidence is accumulating to suggest that control of the blood glucose may play a significant role in preventing these problems.

PLEASE TURN PAGE

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Table 2. THE DIABETIC PROGRESS SHEET IS A CONVENIENT METHOD FOR RECORDING BLOOD AND URINE GLUCOSE LEVELS.

DIABETIC PROGRESS SHEET

PATIENT'S NAME: _____

DIET: TOTAL CAL. _____ C. _____ P. _____ F. _____ DISTRIB. _____

POOL:	HS-Br 7 am	Br-L 11 am	L - S 3 pm	S-HS 9 pm	HS-Br 7 am	Br-L 11 am	L - S 3 pm	S-HS 9 pm
BL.GL. Mg. %								
Ur. Gl.								
Ur. Acet.								
T.V. cc								
% Gl.								
T. Gl. in G gms								
Insulin Dose								
Reaction								

DATE _____

DATE _____

POOL:	HS-Br 7 am	Br-L 11 am	L - S 3 pm	S-HS 9 pm	HS-Br 7 am	Br-L 11 am	L - S 3 pm	S-HS 9 pm
BL.GL. Mg. %								
Ur. Gl.								
Ur. Acet.								
T.V. cc								
% Gl.								
T. Gl. in G gms								
Insulin Dose								
Reaction								

DATE _____

DATE _____

HS-BR — Bedtime to Breakfast
Br-L — Breakfast to Lunch
L-S — Lunch to Supper
S-HS — Supper to Bedtime

BL. GL. — Blood Glucose
Ur. Gl. — Urine Glucose
Ur. Acet. — Urine Acetone
T.V. — Total Volume
% Gl. — Percent Glucose
T. Gl. in gms — Total Glucose in gram

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LOCATIONS WANTED (Physicians interested in locating in Alabama)

CARDIOLOGY: Age 30; Bowman Gray, 1974; seeking practice in Cardiology. Available July 1979. LW-09178.

CARDIOVASCULAR DISEASES: Age 30; Bowman Gray-Wake Forest, 1974; American Board Certified; will be American Board Eligible in 1979; seeking single specialty group, multi-specialty group or partnership. Available as of July 1979. LW-13833.

DERMATOLOGY/INTERNAL MEDICINE: Age 31; Michigan State; 1974; will be American Board Eligible in 1979; seeking single specialty group, multi-specialty group or partnership. Available as of July 1979. LW-13723.

EMERGENCY MEDICINE/INTERNAL MEDICINE: Age 29; Louisiana State University, 1975; Board Eligible in Internal Medicine; seeking emergency practice in a town of 30,000 population and above. Available for practice now. LW-11278.

GASTROENTEROLOGY: Age 33; Case Western Reserve, 1971; American Board Certified; seeking practice in specialty in a town with a population of 20,000 to 100,000. Available July 1979. LW-11378.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 29; Ohio State, 1974; National Board Certified; American Board Certified; American Board Eligible in 1979; seeking single specialty group, partnership or multispecialty group. Available July 1979. LW-13592.

GENERAL PRACTICE: Age 37; University of Louisville, 1967; American Board Certified; seeking general, assistant or associate practice preferably in the Mobile, Montgomery, Birmingham or Huntsville areas. Available September 1978. LW-14129.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02.

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03.

INTERNAL MEDICINE: Age 36; Medical College of Georgia, 1973; American Board Certified in Internal Medicine; seeking practice in specialty preferably in the southern part of Alabama. Date available for practice is open. LW-11178.

OBSTETRICS & GYNECOLOGY: Age 30; Meharry Medical College, 1973; will be American Board Eligible in 1979; seeking practice in partnership, single specialty group or multi-specialty group. Available as of July 1979. LW-13835.

OPHTHALMOLOGY: Age 30; St. Louis University, 1974; National Board Certified; American Board Eligible; seeking solo, partnership or research. Available January 1979. LW-12416.

CARDIOVASCULAR SURGERY/GENERAL SURGERY: Age 35; University of Alabama, 1971; American Board Certified;

will be American Board Eligible in 1979; seeking a practice in solo, partnership or research. Available July 1979. LW-13665.

ORTHOPEDIC SURGEON: Age 31; Medical College of Georgia, 1972; seeking practice in town of 50,000 population. Available August 1979. LW-701.

ORTHOPEDIC SURGEON: Age 30; University of Tennessee, 1973; American Board Certified; seeking practice in specialty in a town with a population of 15,000 or greater. Available for practice January 1980. LW-11478.

ORTHOPEDIC SURGERY/HAND SURGERY: Age 32; Ohio State University, 1972; National Board Certified; American Board Eligible; seeking single specialty group or partnership. Available July 1979. LW-13012.

ORTHOPEDICS: Age 30; University of Alabama, 1973; National Board; seeking practice in the Northern section of Alabama in a town of 30,000 or more population. Available July 1979. LW-09378.

GENERAL SURGERY/GENERAL PRACTICE: Age 46; University of Maryland, 1968; American Board Eligible; seeking practice in partnership, multi-specialty group or emergency room. Available as of December 1978. LW-12085.

PHYSICIANS WANTED (Opportunities for Practice)

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo

PSYCHIATRY: Age 28; University of Iowa, 1976; American Board Eligible in June 1979; seeking practice in specialty or private practice. Available July 1979. LW-09578.

GENERAL SURGERY: Age 34; seeking practice in specialty in a town of 40,000 population. Available as of September 1979. LW-11578.

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400.

SURGEON/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single specialty group or solo. Available July 1979. LW-12031.

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401.

UROLOGY: Age 30; Yale University 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800.

UROLOGY: Age 31; New York Medical College, 1974; seeking practice in a group, partnership or solo. Available July 1, 1979. LW-07278.

working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles — population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,300 population; trade area less than 10,000; south central Alabama; one semi-retired physician in town; clinic available equipped for two physicians; commuter town; nearest hospitals 15 miles; nearest metro area 30 miles with 200,000 population; 5 churches, 4 schools. PW-09278.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.

COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting on Oct. 18, 1978:

- Adopted new regulations governing subdivision sewer systems and water supplies and announced that within three months the Committee would consider standards and guidelines for qualified local health departments to assume primary enforcement responsibility, specifying conditions.
- Approved a research project for a special dietary department for Carraway Methodist Medical Center to serve food to three nursing homes, with specified conditions.
 - Deferred consideration of new Nursing Home Regulations pending publication of Federal requirements in mid-1979 to permit coordination of efforts.
- Received advice of the appointments to the Hazardous Wastes Management Technical Advisory Committee of Governor Wallace on September 13, 1978. This will enable that committee to begin activities under the new Hazardous Wastes Management Act.
- Received advice regarding an Attorney General's Opinion concerning the Hearing Aid Board.
- Was advised of a suit by the Alabama Council on Human Relations, Inc. vs. Secretary of the U.S. Department of Agriculture and Federal and State officials providing food under the Women, Infants and Children Supplemental Food Program.
- Was advised by the State Health Officer of limited funds for the WIC Food Supplement Program and of negotiations in attempting to keep the program operational in spite of delayed appropriations from Congress.
- Was advised of the danger posed by cases of cholera occurring in Louisiana and of the effect on safeguarding food supplies and the importance of surveillance of any unusual cholera-like diseases which would indicate spread outside the original geographical area.
- Took note of the publication in CDC Morbidity and Mortality Weekly Report regarding the Pneumococcal polysaccharide vaccine. The Committee authorized further publication to the medical profession regarding this immunizing agent.
- Was advised regarding the current DHEW organization pattern and emphasis of the Medical Information Tracking System utilized by Secretary Califano in evaluating health program progress.
- Was advised of the action of Cleburne County Commission withdrawing from the Cheaha District Board of Health and maintaining a County Health unit.
- Received a progress report on the Cervical Cancer Screening Program and of the cooperative efforts to improve this preventive program in Alabama by official, voluntary and private agencies working together. A formal scientific paper is expected from this effort, in cooperation with the Cancer Coordinating Center in Birmingham.
- Received advice on the increase in venereal disease. Particular emphasis is on the nationwide increase in syphilis, with unusual problems in Alabama.
- Confirmed the action of the Drug Enforcement Administration of the Department of Justice placing preparations containing Difenoxylin, in combination with Atropine Sulfate, into Schedules IV and V, effective September 27, 1978 and published in the Federal Register, Vol. 43, No. 167, Monday, August 28, 1978. □

Tenuate® (diethylpropion hydrochloride NF)

Tenuate Dospan® (diethylpropion hydrochloride NF) controlled-release

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Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors. (Hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecomastia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agranulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride) One 25 mg. tablet three times daily one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release. One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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References: 1. Citations available on request - Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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Be A Careful CME Consumer

by GEORGE D. OETTING, Ed.D., Director of Education

Maybe you never thought of yourself as a CME consumer but you really are if you consider CME as one form of goods and services — the goods being the educational materials provided and the services as the educational experiences.

CME is big business now, involving the expenditure of more than \$1 billion each year and many thousands of hours of physicians' time.

The voluminous advertising brochures you receive every day in the mail concerning educational programs for you and your staff are a good indication of the number of people who are competing for your time and also your money!

Perhaps a little bit of the Ralph Nader/Consumer Protection Agency approach might be appropriate in selecting your own CME goods and services. These are some of the suggestions I would propose to you to help you be a more careful CME consumer:

The Selection of a Personal CME Program: If the sponsored activity is one well known to you and has been putting on programs for a number of years, then you probably need to make no further check concerning the quality of the CME program.

If you are planning to attend an out-of-town meeting with an unknown organization, then check the AMA Physician's Recognition Award booklet which lists all the organizations having CME accreditation. This is not necessarily indicative of a quality education program but at least the organization has been through a formal review process in the last few years.

Check to determine the type and amount of CME credit which has been approved for each program. If the advertising brochure says something

like "CME credit applied for" then you'd better double check. For example, one of our own MASA members (who is also an AAFP member) recently attended a two-day advanced workshop on CPR. Later on he found out that the sponsor had failed to properly apply for AAFP prescribed credit, and the member lost considerable credit.

Make sure whenever possible to get an attendance certificate from your CME meeting, particularly for Category I credit. This will be helpful in verifying your CME activity and keeping the local IRS agents happy. If you ever fail to get a promised certificate, please let us know and we may be able to help through our AMA contacts. We have done this in some instances.

Selection of Practice Management Programs for You or Your Office Staff: The Medical Association does not endorse the practice management programs of any commercial organizations; rather, the Education Department works closely with the AMA Department of Practice Management in co-sponsoring many workshops each year.

This has been done because of the high quality of the programs offered through AMA and the low cost to MASA members. Fees are charged to cover workshop expenses. Therefore we hope you will give our workshops consideration in planning the educational activities of you and your staff.

It should be pointed out however, that there are currently many commercial companies also offering practice management workshops of various kinds. Many of these are of good quality and are used and endorsed by some of the other state medical societies.

Therefore, to assist you in making

an informed decision in selecting practice management workshops, we have established a file on all known commercial companies who present these programs within Alabama. As soon as we hear about a particular company, we will send them a letter and request further detailed information about their operation and references from prior workshop presentations. In most cases we receive a prompt, complete response, a pretty good indication of their integrity.

But in any event, the information in these files is available to any of our members who want to know about any particular company before making a selection decision. Legally we can not make any value judgment since this must be done by the individual physician, but we will be happy to pass on any information we do have.

The number of these commercial companies coming into Alabama has been increasing in the last few months. For example, from July to September 1978, six different companies presented practice management workshops at various Alabama locations, primarily the big cities. Fees varied from \$37 to \$145 for a one-day workshop; most were in the \$75-\$125 range. The home offices of these companies were all over the United States.

Call Us For Help: Don't hesitate to give us a call any time you have a question concerning an organization producing a CME program or a practice management workshop. Many people have already started doing this as a result of prior articles in *The Alabama M.D.*; we would hope that many more will avail themselves of these services. We will do our best to check out the organization to help you be a more knowledgeable CME consumer. □



AUXILIARY

Mrs. Aubrey E. Terry
President, AMASA

I.P.S. – Part Two

Your attention was directed to some general information and thoughts in last months *Journal* about the impaired physician. Comment was made concerning efforts now underway to develop programs for allowing people to work more effectively in these areas.

In this article an attempt will be made to be more specific, so as to show that some problems do exist, raise questions about their cause, and encourage study for their solution.

From a practical standpoint it would seem that initially much can be accomplished by enlisting broad individual interest and participation. But in the final analysis enlightened and understanding members of an entire family may be what is needed to develop necessary preventive mechanisms, and to function as keys that can help unlock, surface and disperse the memory of previous complicated difficulties.

Some of the more glaring problems in this area have been pointed out by physicians themselves. One doctor, while attending a session on "The Medical Marriage" at the World Congress of Family Medicine/General Practice in Montreux, Switzerland, stated: "I've been interested in this subject ever since I found my wife in the

waiting room at the end of morning surgery."

Another U.S. physician told the group about the demise of his own wife 1½ years previously. He encouraged physicians to be more observant and urged them to be as attentive to their wives as they are to their patients.

Dr. Sarah B. Nelson, a psychiatrist in private practice in Phoenix, Arizona, told the audience among other things that a survey of 160 wives of members of the Florida Medical Association indicated that 95% felt "neglected." The doctor's practice, she said, "is seen as a demanding mistress who always wins. Patients always seem to come first. Physicians can easily use the demands of their practice to shield themselves from the demands of wife and family."

Yet, one is made to wonder about the cause for this feeling of neglect — and does it not work both ways? Have spouses of physicians gotten themselves too busy too often with things of lesser importance? Are wives too often apathetic about everyday topics of interest which their husbands either enjoy or must devote some attention to of necessity? Do we show adequate concern, or at least lend an ear about problems in the office or hospital—as

well as those inherent where changing patterns of practice must occur?

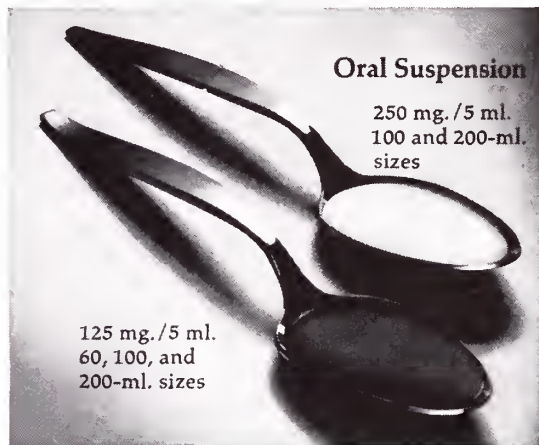
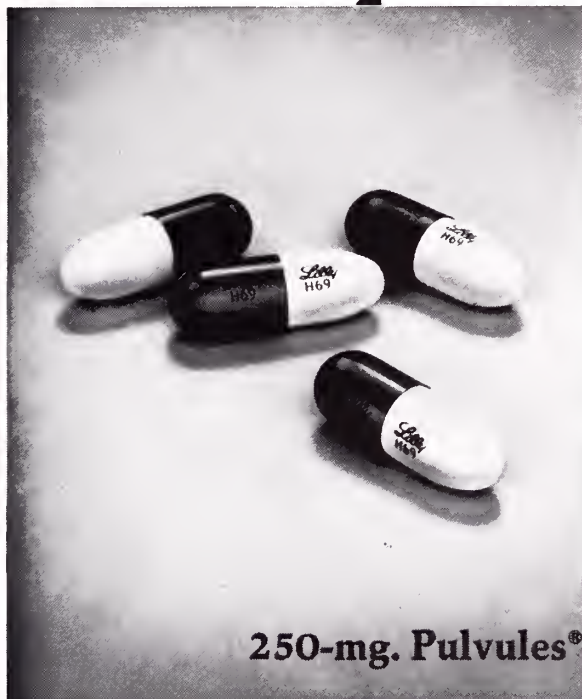
Where our children are concerned, do we avail ourselves to converse, work and play with them so that they may have the opportunity to study, learn and mature under what we believe to be the best circumstances? How well do we take advantage of the many ways by which we can better keep abreast of pertinent information that is readily available to us? But I suppose one real question is, how many of our problems are brought about unnecessarily?

Answers to all of these questions are obviously not yet available. But we can certainly believe that making an effort to consolidate and distribute worthwhile facts, information and ideas will be most helpful.

In becoming available to be a part of this effort we can show that we care and do wish to share in the continuation of this endeavor, which should be helpful to all those who wish and need to participate in the future.

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Contraindications: Tablets in children under 6 months of age, known hypersensitivity, acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

ORAL: Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients; should not be employed in lieu of appropriate treatment. When using oral form adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE: To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling, and, rarely, vascular impairment when used I.V., inject slowly, taking at least one minute for each 5 mg (1 ml) given, do not use small veins, i.e., dorsum of hand or wrist; use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest, concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea, have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status.

Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals under careful surveillance because of predisposition to habituation/dependence. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence, can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), i.e., phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function, avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

INJECTABLE: Although promptly controlled, seizures may return, readminister if necessary, not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported, should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, have been observed in patients during and after Valium (diazepam) therapy and are of no known significance.

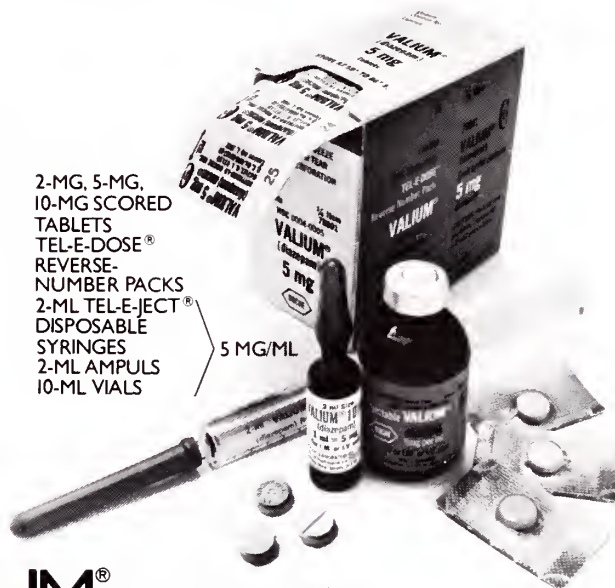
INJECTABLE: Venous thrombosis/phlebitis at injection site, hypoactivity, syncope, bradycardia, cardiovascular collapse, nystagmus, urticaria, hiccups, neutropenia.

In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure, employ general supportive measures, I.V. fluids, adequate airway. Use levarterenol or metaraminol for hypotension, caffeine and sodium benzoate for CNS-depressive effects. Dialysis is of limited value.

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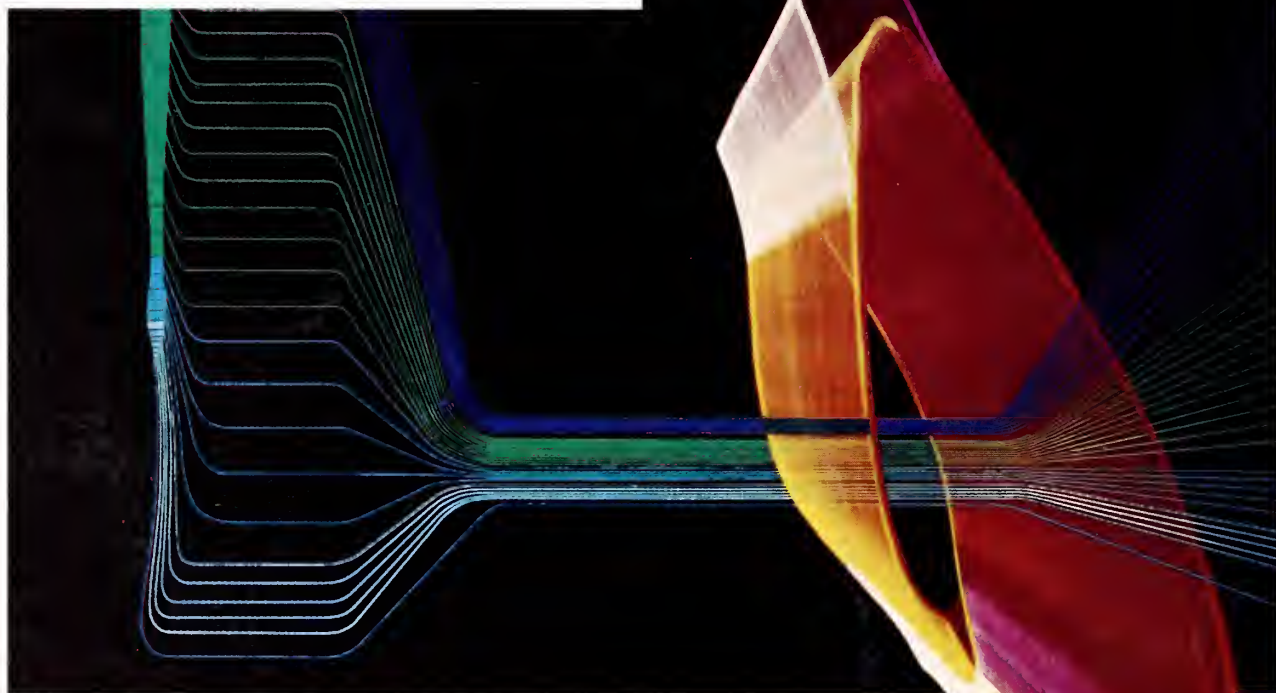
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The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma. May be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions; tremor; abdominal and muscle cramps; vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Use in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over-sedation.

Side Effects: Drowsiness, confusion, diplopia,

hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.



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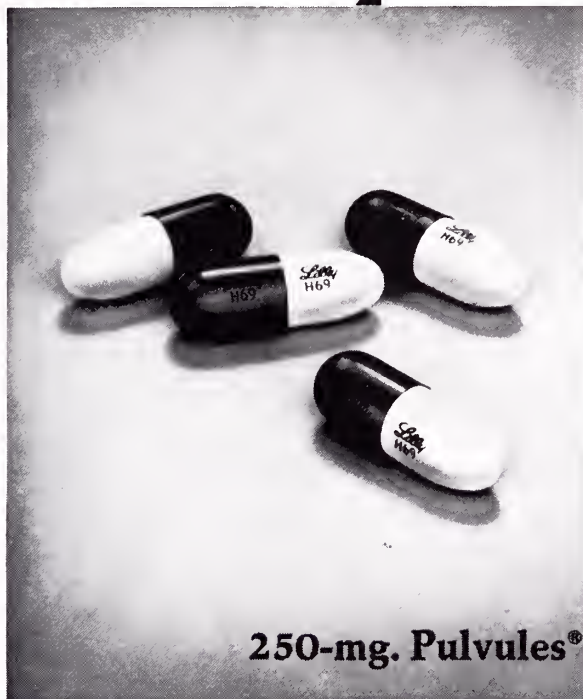
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Season's Greetings from the Middle Ages, when medical schools were not as crowded as they are today. This 1497 woodcut from 'Hortus Sanitatis,' published in Strassburg five years after Columbus discovered America, is considered the most important illustrated work on the natural sciences of the period. It depicts the teaching setting of that era of medicine. From the priceless collection of the late Lawrence Reynolds, M.D. (1889-1961), Lister Hill Library of the Health Sciences, Birmingham.

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FROM THE EXECUTIVE DIRECTOR

AN END AND A BEGINNING

Janus, the ancient Roman diety for whom January was named, was depicted as having two faces — one facing forward and the other behind, the future and the past.

Janus was a god of gates and doors, and thus of beginnings.

As we approach January, we customarily look back at the old year and forward to the new, thus to assess the one and plan for the other.

A year ago, if you recall, 1978 was to have been the year of national health insurance. That it wasn't is due in part to Secretary Califano's admission that the nation simply could not afford a program of the scope of that favored by Senator Kennedy and organized labor.

The Secretary even testified to that effect before the Senator's committee, thus establishing what had been suspected: a division between Kennedy and labor on the one hand, and the Carter Administration on the other.

As we look forward to 1979, again forecast as the year of national health insurance, what will happen? Will Kennedy pursue his bill, breaking permanently with the Administration in what some see as his own bid for the Democratic nomination in 1980?

Will the President permit the challenger, if Kennedy is perceived as that next year, to steal his thunder in that all-important year before the conventions? Is Mr. Carter smarting under the widespread contention that he is a one-term President?

Stay tuned. Next year may see a political Donnybrook in which health care and specifically the medical profession become everybody's footballs.

1979 could be the year, in short, when medicine's very survival as an independent profession is at stake.

Whatever eventuates, may I take this opportunity, in the annual holiday suspension of hostilities, to wish you the best of everything for this season and the new year.



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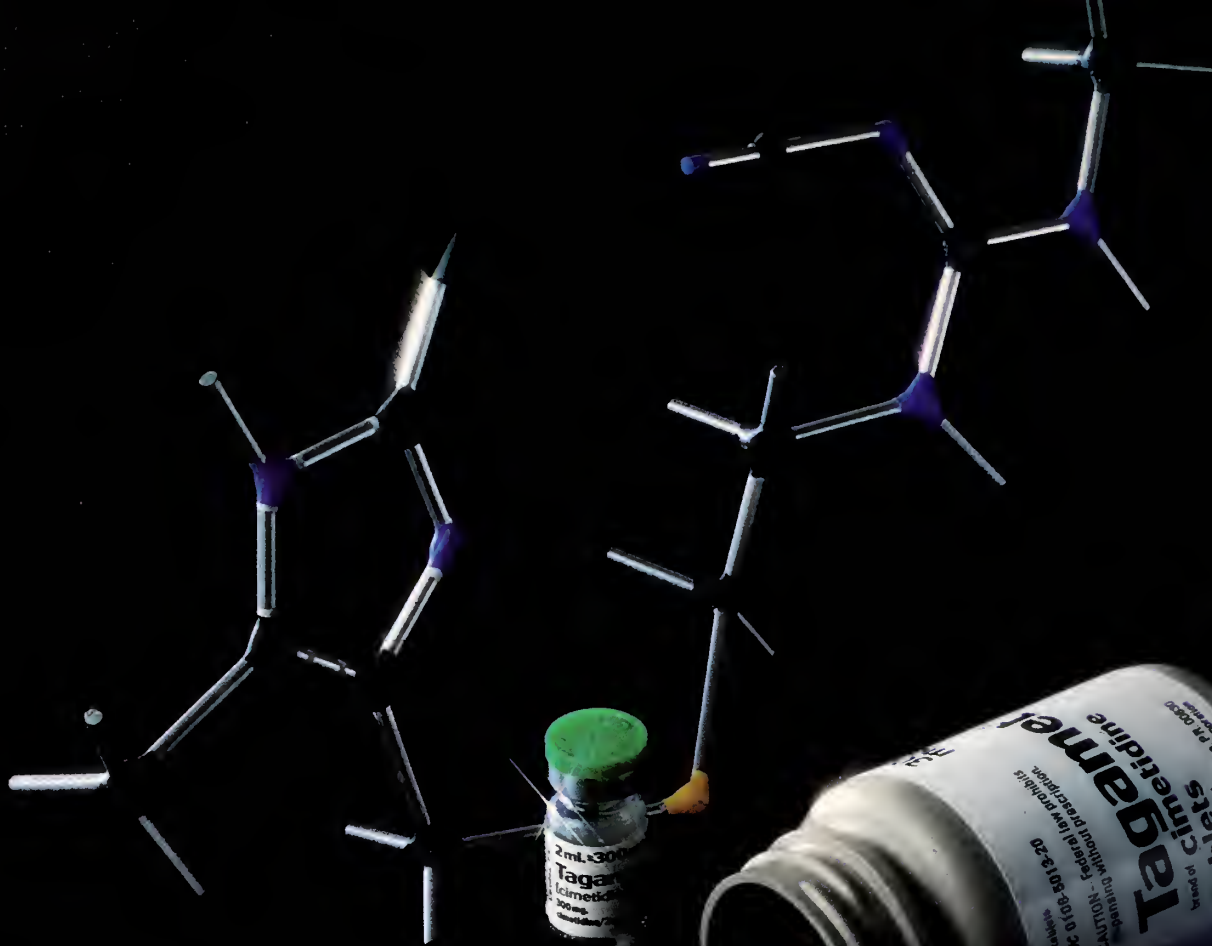
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The Year Ahead

Hiliary H. Henderson, Jr., M.D.
President



As the old year winds down, it's time to plan for the new one, which could bring with it the most serious challenges in the history of medicine.

Foremost among these challenges will be national health insurance. And 1979 may be the year. It could become a no-win tug-of-war between President Carter's bill, when he finally presents one, and the even more dangerous one already offered by Sen. Edward Kennedy, who is supported by organized labor in a movement that would, if successful, socialize American health care without actually calling it that.

To prevent this will demand a united effort of all the country's physicians, who know better than most citizens what the results of a bill like Senator Kennedy's would be — rationing of health care, loss of freedom of patients and physicians, rising costs, reduced quality, and regimentation.

The congressional fight might turn out to be a Mexican stand-off between the Carter Administration, which says the nation simply can't afford a NHI bill like Kennedy's, and the Kennedy-labor forces, which have already stated their argument that health care is a right, regardless of the costs.

Although this debate may occupy the nation in much of 1979, at least we can all pause now during the holiday season and reflect on the blessings we have.

It is my hope that yours are large indeed, that Christmas 1978 is a good one for you and your family and that 1979 will be a personally and professionally rewarding year.

Merry Christmas and a Happy New Year.

Hiliary H. Henderson Jr.

From The Grass Roots To The Ivory Towers

By Dean William E. Lotterhos, M.D.
Professor of Family Medicine
Director of the Montgomery Family
Practice Program

After 25 years of growing up in the grass roots of medicine, through practicing General Practice (by choice) for 20 years and five years as a Family Physician (by examination), I decided to heed the call and return to the "ivory tower."

This time it was to be as a full-time faculty member. It has been determined by studies presented to the Willard Committee that one of the reasons for the number of medical students coming out of the "ivory towers" and going into General Practice was declining due to a lack of role models in the medical schools.

Therefore, after much contemplation and with my wife's concurrence, I decided to make the sacrifice and leave private practice and go to the "ivory tower" by invitation to create a "role model" of a Family Physician.

The interior of an "ivory tower" was not new to me for in Mississippi I served on a committee that assisted in breaking ground for a four year medical school and occasionally was invited to visit as a part-time volunteer faculty in General Practice. Yet to become a full-time professor and chairman of a new department of Family Medicine, at the Medical College of Georgia, I was in for some surprises inside the "ivory tower" that I shall share with you in this, along with my views on the "town-gown" relationship.

Busy Tower

In the first place I found most of the folks in the "ivory tower" to be busy, busy — very few professors just sitting on their tenure. If you think hospital staff committee work occupies a lot of your time, multiply that by 10 and you'll be somewhere close to the range of time spent in committee work in the "ivory tower." There

are always so many meetings to attend.

According to Dr. Carleton B. Chapman's editorial in *The New England Journal*, "medical education always tends to revert, after initial enthusiasm has waned, to established patterns. The record, however, supports no such view."¹

As he points out, there are many changes in curriculum content and sequence. There is earlier exposure to clinical problems and there is closer correlation between clinical sciences and basic sciences. "In addition to these changes and trends, some institutions have superimposed experiments of unusual sweeping design..."

Family Practice could well be considered as a sweeping design as pointed out by Dr. John P. Geyman in his special article, "Family Practice in Evolution."² There are many occupants of the "ivory tower" who have not fully understood this new discipline. However, some have grasped the concept and are doing an excellent job of responding to the "grass roots" cry for 'Help!'

Missouri started many years ago allowing a full-time faculty person to go to the "grass roots" to practice medicine while the "grass roots" physician went to the "ivory tower" to be a part-time teacher and brush up on the latest scientific developments that would benefit his patients when he went back home. This was a good beginning but the federal dollars gave out, and I am not aware of any other program that is in existence.

After this experiment there was a much better relationship between "town and gown" in Missouri — "Not as many of those 'L.M.D.'s making all of those mistakes, nor as many of those 'square-heads' in the university who just don't understand the situation."

Tower and Roots

Medical schools do and should produce a well qualified fully educated "undifferentiated" M.D., but they should also be concerned with this M.D. becoming a *physician* if this is to be their role and to make the physician's life time that of learning by providing continuing educational experience; some of it as the "ivory tower" but some of it at the "grass roots." Since moving to Alabama two years ago I find U.A.B.'s Outreach Program has been doing a creditable job in this area.

Patient care has been the main emphasis at the "grass roots" level for years and has become more a part of the curriculum in most medical schools as it should be. The medical students deserve a lot of credit for assisting to bring this about.

It's refreshing to find the Executive Dean, Dr. Jim Pittman, here in Alabama serving on the Public Health Committee of M.A.S.A. and is very active in attending as many meetings as his schedule will allow. More of the hierarchy in the schools of medicine should be involved with the physicians in private practice, especially members of their profession who have graduated from their school and have gone out into practice. These physicians would be in a better position to relate to their mentors what would more properly prepare them to face what would be expected when they face the "real world."

Another surprise to me in the "ivory tower" was the *attitude* of the students. Most of them are enthusiastic and very sophisticated, but in some schools they attend classes when they want and many subscribe to a professional note-taking service and their goal in life is "to pass the next examination," instead of "how will this make me a better doctor?"

There should be more of the art of medicine taught, along with the science and long range planning in the curriculum to assist them in understanding their ultimate goal. More and more students are beginning to ask "Am I really getting my money's worth (tuition) in being educated to become a good, well qualified medical doctor?"

In the August 4, 1978, volume 240, of *J.A.M.A.* there is a Special Communication entitled "The Challenge of Family Practice Reconsidered" by Drs. William R. Willard and C. H. "Bill" Ruhe. The committee recommended that "more emphasis should be given to the preceptorships as an education experience" and "they should be well-planned and well-conducted."³

Here is an excellent area where the "ivory tower" occupants and the "grass roots" workers could improve their relationship in Alabama. Most every physician that is worth his salt has something that they have learned to assist in their profession since they had their formal training and would be happy to share with a would-be physician if they were called upon to do so.

The medical centers are having difficulty in finding enough clinical material, whereas the grass roots are having trouble finding enough time to take care of the deluge of 'sick' people. So why not share with each other on a formal educational basis? If there is to be a preceptor type of education it must have quality controls to be successful or it will falter as it did at the turn of the century.

Greatest Reward

Montgomery is one of those communities that has all kinds of clinical materials and the "grass roots" physicians have been most cooperative in helping to set up this satellite of the "ivory tower."

Perhaps as time goes by there can be an 'extension' of the Tower and improve the relationship in this community to make them feel that they are more of a part of the formal educational system.

My greatest reward has been the challenge of the students, providing them with as much of the high quality that is expected of the "ivory tower," mixed in with the art that I have learned from having been in the "grass roots." Some students are eager to learn from those of us who have been on the firing line.

Last year the students at UAB started a Medical Education Community Oriented Program for the entire state which is getting off to a good start. Dr. John Buckingham, Department of Family Practice at UAB, is the faculty advisor. This program, if successful, could be another means of establishing a closer ties between the medical school and the practicing physicians and the communities in which they serve.

Many of you may ask of what are you the Dean of and what entitles you to write this editorial as a Dean? When I came to Montgomery it was with the understanding that I would develop an accredited family practice residency (which was accomplished in November 1977) and the long range plans were to develop an Area Health Educational Center commonly referred to as an A.H.E.C.

Accordingly, planning began for a larger, more comprehensive educational program that would encompass concepts similar to those crystalized in the Carnegie Commission's special report on Higher Education, "Higher Education and the Nation's Health" and proposed by the president in his "Health Message" to Congress in February, 1971. These plans have been put on the back burner but since the concepts of Family Practice involve

DEAN'S REPORT

CONTINUED FROM PAGE 9

a multi-interdisciplinary health educational concept I look forward to the time I can go back to the drawing board to develop further plans for an A.H.E.C. In the meantime, I'm serving as Dean in name only, but find the title alone has had its advantages in development of the Family Practice Program here in Montgomery.

Montgomery Clerkships

We have initiated a program to provide a clerkship in Family Medicine here in Montgomery. It has been approved as an elective for junior or senior medical students that have already completed a clerkship in Medicine or Pediatrics. This clerkship shall provide an environment which shall allow students to become familiar with comprehensive and continuing health care of individuals within the context of the family unit; shall place the student in a clinical setting where they observe both the scien-

tific and humanistic approach to medicine; shall create an atmosphere which allows the medical students to develop strong motivation for personal service, prevention, and maintaining high levels of health standards for patients. The first medical student started November 15. The second one is scheduled to begin in January.

I agree with Professors Frazier and Hiatt of Harvard Medical School in their recommendations: "Medical education should be broadened to give much greater emphasis to quantitative analytic methods, including epidemiology and biostatistics."⁴

Medical schools should take the lead in this type of change but it will be much more effective if the physicians in the "grass roots" would be consulted and assist the "ivory tower" leaders in making these or any changes in the health care system educational programs.

Now after six years of exposure

inside the "tower" and on the fringe, I wanted to share some of my thoughts about medical education from one who has spent most of his professional life in the "grass roots." Having done this, I may soon find myself back in "the pasture."

On the other hand, I hope that I may have tickled the imagination or curiosity of some of you practicing physicians that may be qualified to teach — pay a visit to the "tower" and find out!

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4. Science, Evaluation of Medical Practices, Howard S. Frazier and Howard H. Hiatt, Vol. 200, No. 4344.
5. A.M.A., Meeting the Challenge of Family Practice, Sept., 1966.

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Medicine And Art

On the preceding page is the title page from William Hunter's great 18th Century medical work, *The Anatomy of the Gravid Human Uterus*, a work of astonishing beauty. The illustrations depict the gravid uterus life-size. To give some idea of the breath-taking artistry of the engravings, done by the famous John Baskerville, the Journal is providing its readers this holiday season with a fold-out bonus of one of the more noted of these illustrations. The fold-out is only slightly larger than the original by Dr. Hunter, the leading obstetrician in London of his day. This work is considered one of the finest anatomical atlases ever produced. Dr. Hunter built an anatomic theater and museum, where the best British anatomists and surgeons, including brother John, were trained. The Human Gravid Uterus is in the Reynolds Historical Library, Birmingham.



Holiday Issue

Andreas Vesalius

1514 - 1564

Vesalius's 'De humani corporis fabrica,' from which these illustrations were copied by MASA, was published in 1543 and is today regarded as one of the greatest books of the world, ranking second only to Harvey in the field of medical history.

It was the first modern treatise on anatomy based on dissection of the human body. The Flemish anatomist made many discoveries in his field and became a noted professor of anatomy in the mid-16th century at the University of Padua, where he produced 'Fabrica,' in an arrangement with the pupils of the famous painter Titian.

Vesalius did some of the illustrations himself but the chief artistic contributor is believed to have been Jan von Calcar. The illustrations, some of them whimsical and all of them striving for an element of art, overthrew many of the hitherto uncontested doctrines of the 2nd Century anatomist Galen and caused a storm of criticism to be directed against Vesalius, who was thus cast into the unpopular role of iconoclast.

He left Padua under persistent attack for his beliefs and became physician to Emperor Charles V and to his son Philip II. In 1563,

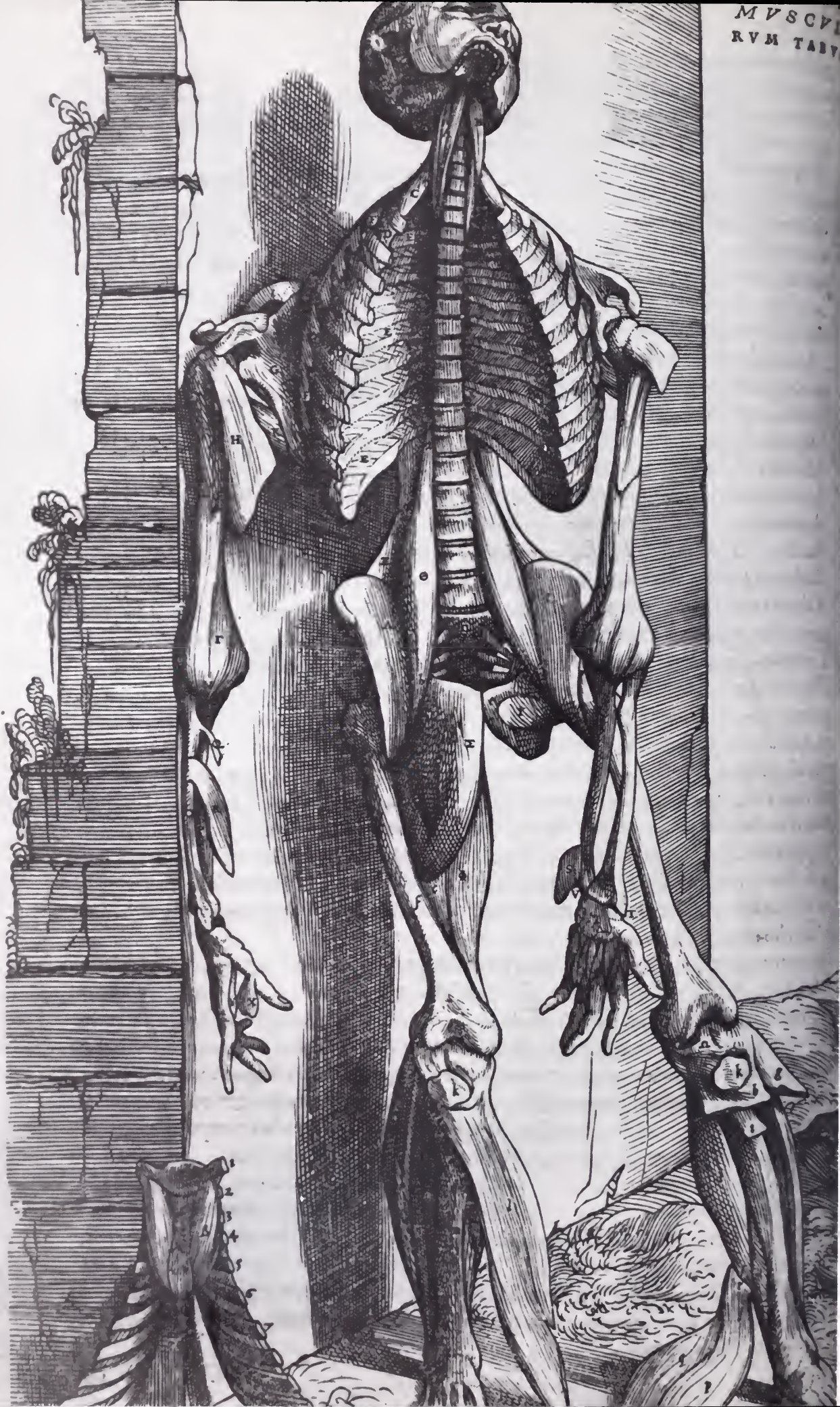
he made a pilgrimage to Jerusalem and on the return voyage died in Greece.

This great work was the first notable acquisition of Lawrence Reynolds, M.D., born at Skipperville, Ala., near Ozark, in 1889. Shortly after World War I, in which he served in the Army Medical Corps in France, the young Johns Hopkins radiologist bought this work for the then princely sum of \$600, at a time when his monthly salary was \$250.

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Although he practiced in the North and East, never returning to Alabama except to visit, Dr. Reynolds ultimately bequeathed the entire collection to the University of Alabama before his death in 1961. He did so, according to the late Tinsley R. Harrison, M.D., because his University diploma had graced his walls for many years and he felt indebted.

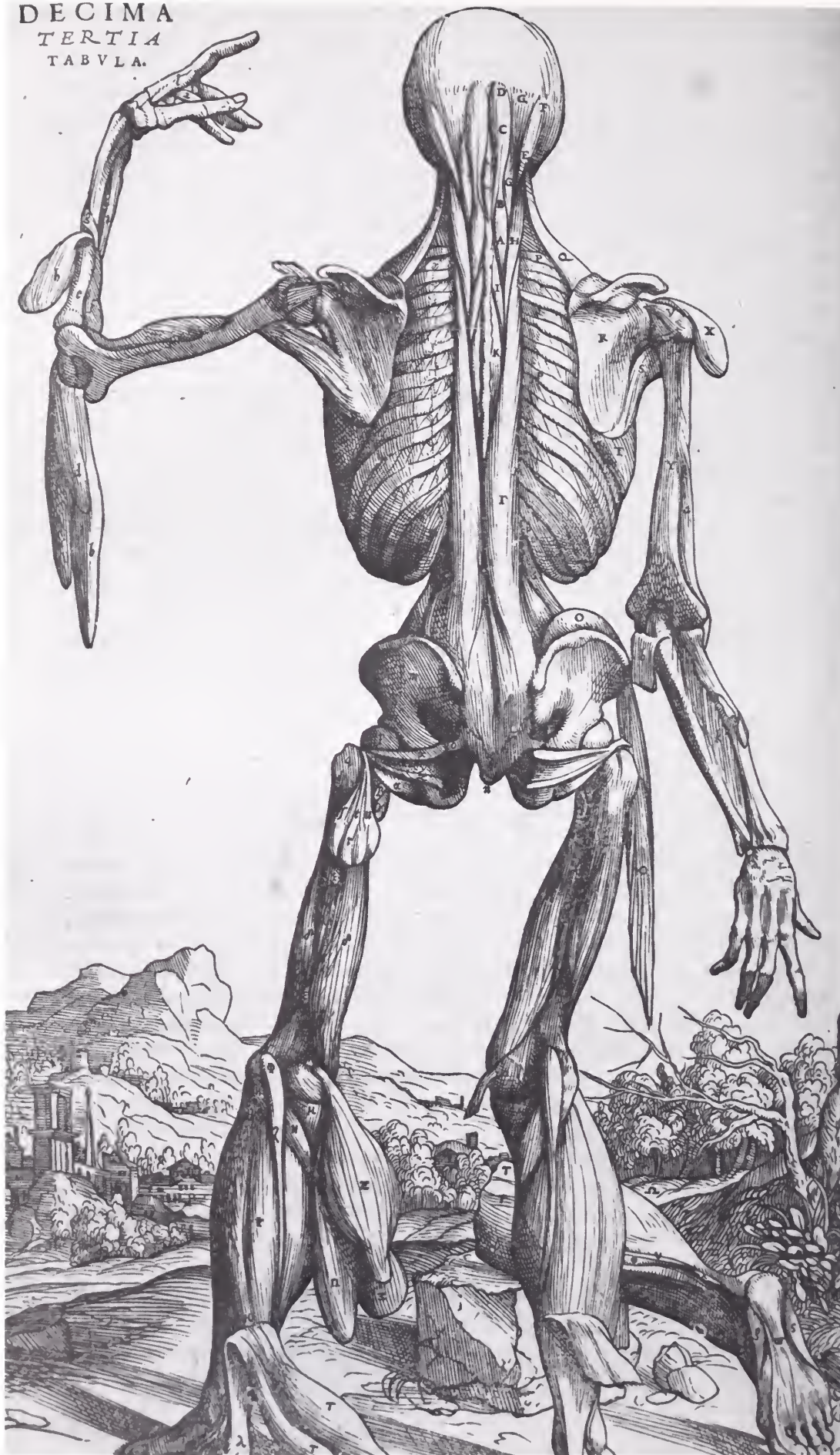
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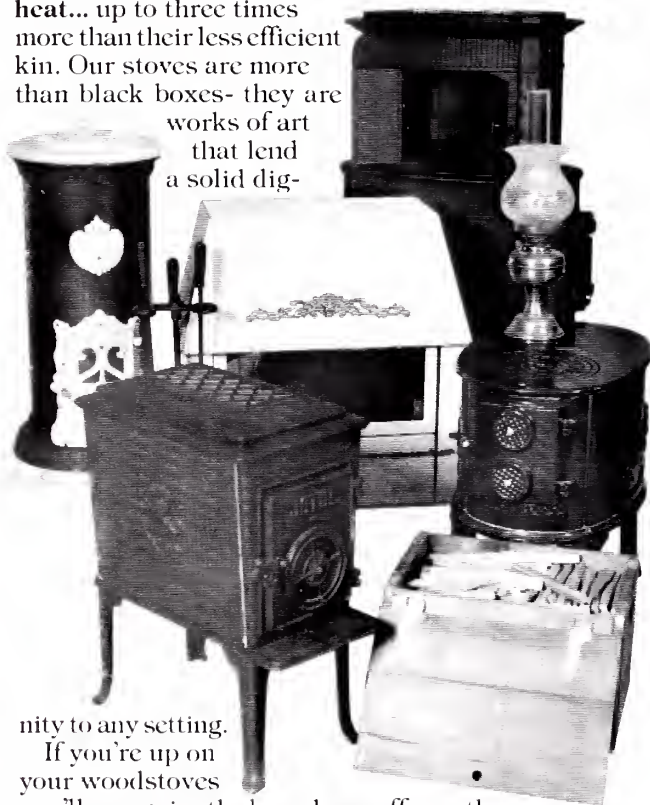
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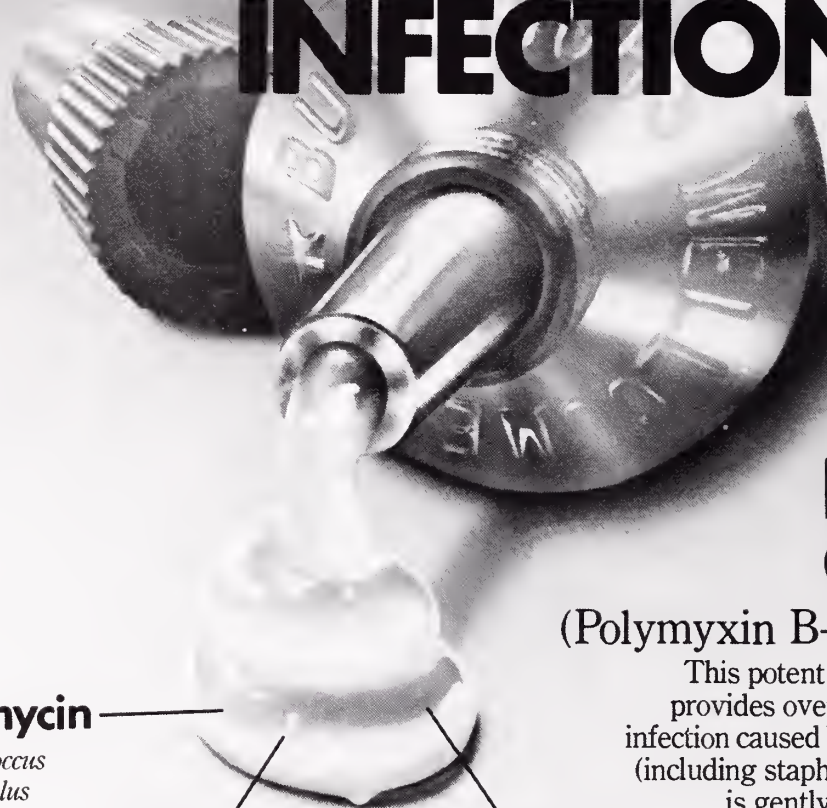


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WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is

affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

CARDIOLOGY: Age 30; Bowman Gray, 1974; seeking practice in Cardiology. Available July 1979. LW-09178.

CARDIOVASCULAR DISEASES: Age 30; Bowman Gray-Wake Forest, 1974; American Board Certified; will be American Board Eligible in 1979; seeking single specialty group, multi-specialty group or partnership. Available as of July 1979. LW-13833.

DERMATOLOGY/INTERNAL MEDICINE: Age 31; Michigan State; 1974; will be American Board Eligible in 1979; seeking single specialty group, multi-specialty group or partnership. Available as of July 1979. LW-13723.

EMERGENCY MEDICINE/INTERNAL MEDICINE: Age 29; Louisiana State University, 1975; Board Eligible in Internal Medicine; seeking emergency practice in a town of 30,000 population and above. Available for practice now. LW-11278.

GASTROENTEROLOGY: Age 33; Case Western Reserve, 1971; American Board Certified; seeking practice in specialty in a town with a population of 20,000 to 100,000. Available July 1979. LW-11378.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 29; Ohio State, 1974; National Board Certified; American Board Certified; American Board Eligible in 1979; seeking single specialty group, partnership or multispecialty group. Available July 1979. LW-13592.

GENERAL PRACTICE: Age 37; University of Louisville, 1967; American Board Certified; seeking general, assistant or associate practice preferably in the Mobile, Montgomery, Birmingham or Huntsville areas. Available September 1978. LW-14129.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02.

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03.

INTERNAL MEDICINE: Age 36; Medical College of Georgia, 1973; American Board Certified in Internal Medicine; seeking practice in specialty preferably in the southern part of Alabama. Date available for practice is open. LW-11178.

OBSTETRICS & GYNECOLOGY: Age 30; Meharry Medical College, 1973; will be American Board Eligible in 1979; seeking practice in partnership, single specialty group or multi-specialty group. Available as of July 1979. LW-13835.

OPHTHALMOLOGY: Age 30; St. Louis University, 1974; National Board Certified; American Board Eligible; seeking solo, partnership or research. Available January 1979. LW-12416.

CARDIOVASCULAR SURGERY/GENERAL SURGERY: Age 35; University of Alabama, 1971; American Board Certified;

will be American Board Eligible in 1979; seeking a practice in solo, partnership or research. Available July 1979. LW-13665.

ORTHOPEDIC SURGEON: Age 31; Medical College of Georgia, 1972; seeking practice in town of 50,000 population. Available August 1979. LW-701.

ORTHOPEDIC SURGEON: Age 30; University of Tennessee, 1973; American Board Certified; seeking practice in specialty in a town with a population of 15,000 or greater. Available for practice January 1980. LW-11478.

ORTHOPEDIC SURGERY/HAND SURGERY: Age 32; Ohio State University, 1972; National Board Certified; American Board Eligible; seeking single specialty group or partnership. Available July 1979. LW-13012.

ORTHOPEDICS: Age 30; University of Alabama, 1973; National Board; seeking practice in the Northern section of Alabama in a town of 30,000 or more population. Available July 1979. LW-09378.

GENERAL SURGERY/GENERAL PRACTICE: Age 46; University of Maryland, 1968; American Board Eligible; seeking practice in partnership, multi-specialty group or emergency room. Available as of December 1978. LW-12085.

PHYSICIANS WANTED (Opportunities for Practice)

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo

PSYCHIATRY: Age 28; University of Iowa, 1976; American Board Eligible in June 1979; seeking practice in specialty or private practice. Available July 1979. LW-09578.

GENERAL SURGERY: Age 34; seeking practice in specialty in a town of 40,000 population. Available as of September 1979. LW-11578.

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400.

SURGEON/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single specialty group or solo. Available July 1979. LW-12031.

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401.

UROLOGY: Age 30; Yale University 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800.

UROLOGY: Age 31; New York Medical College, 1974; seeking practice in a group, partnership or solo. Available July 1, 1979. LW-07278.

working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles — population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,300 population; trade area less than 10,000; south central Alabama; one semi-retired physician in town; clinic available equipped for two physicians; commuter town; nearest hospitals 15 miles; nearest metro area 30 miles with 200,000 population; 5 churches, 4 schools. PW-09278.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.

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AUXILIARY

Mrs. Aubrey E. Terry
President, A-MASA

December, 1978. For me, this time of the year is a time for re-assessing ones priorities and activities, a time for examining one's values, and a time for reaffirming ones goals. I prefer to do this the last part of the year instead of the first, since it gives me the feeling that there are still a few days left to accomplish unfinished plans and resolutions.

Psychologists estimate that each day we are given some 700 chances to say something. Talkative people utter about 12,000 sentences every day, which averages out to about 100,000 words. Are we making ours count?

Auxiliary members are making theirs count. Some of the areas of participation this year include—

Screening programs for vision, hearing, hypertension and other problems of our school children;

Giving scholarships to area young people pursuing medical related careers;

Fund-raising for grants to medical schools and medical student scholarships and loans;

Fund-raising projects for buying equipment for use in local hospitals and ambulances;

The immunization awareness program over Alabama, working to establish a Museum of Biology and Health in Birmingham;

Helping to support sound legislation which affects the health and welfare of the citizens of our state;

True Greatness

*A man is as great as the dreams he dreams,
As great as the love he bears;
As great as the values he redeems,
And the happiness he shares.
A man is as great as the thoughts he thinks,
As the worth he has attained;
As the fountains at which his spirit drinks
And the insight he has gained.
A man is as great as the truth he speaks,
As great as the help he gives,
As great as the destiny he seeks,
As great as the life he lives.*

C. E. Flynn

Encouraging the implementation of the teaching of comprehensive health education in our school to comply with the new law, as soon as it is feasible;

Health fairs in many of the shopping malls;

Raising funds for purchase of equipment and individual participation in CPR programs;

Fund-raising projects to preserve and restore Landmarks of medical history in our state;

Sharing drugs and medical supplies such as reading glasses, surgical gloves, microscopes with a mission hospital in Zaire, Africa;

Showing interest in the development of all phases of an impaired physicians program;

Encouraging the implementation

of the teaching of comprehensive health education in our schools to comply with the new law as soon as it is feasible.

As the year 1978 comes to a close, I'm pleased to update you on the fine work that is being done by our Auxiliary and wish to express my appreciation to you for it. I also want to especially thank Auxiliary and MASA Members and the State Office Staff for the courtesies extended to me.

Best wishes for a happy holiday season and a healthy and prosperous new year.

Hetty

POSITIONS AVAILABLE

WANTED: General practice psychiatrist to work with community mental health program. Have an understanding of community mental health work, able to work with a wide variety of staff, willing to do some travel within catchment area on scheduled basis. Contact Montgomery Area Mental Health Center, 1616 Mt. Meigs Road, Montgomery, Alabama. Telephone 263-7541.

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7545, evening hours 553-2198.

FAMILY PHYSICIANS—Two (2) General Surgeon one (1) either or two offices in Mobile. Flexible arrangements in a very small group. G. L. Spafford, P.O. Box 160272, Mobile, AL 36616.

ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

WANTED—Board Certified Internist to do insurance type office medical examinations in Alabama. One day per week. Excellent pay. Dr. W. H. Escoffery, 14500 S.W. 186 St., Miami, Fla. 33033. Telephone 305/247-7285.

UROLOGIST, ENT PHYSICIAN AND PEDIATRICIAN WANTED—Board Eligible or certified; multi-specialty group of twelve; central Alabama with metropolitan area 100,000; 45 minutes from U of A Medical School; three lakes within 45 mile radius; for physician still training, \$500 per month supplemental income until join group. Cost of moving van furnished. Clinic established twenty-five years, X-ray and lab facilities. Send curriculum vitae to J. L. Thompson, M.D., F. Hood Craddock Memorial Clinic, 308 West Hickory Street, Sylacauga, Alabama 35150.

PHYSICIAN NEEDED to perform light physicals in the greater Birmingham area. Contact Mr. Mike Stough collect (513) 621-8728. We are not an insurance company.

GENERAL INTERNIST, with or without subspecialty interest, to join two other internists in practice in medium-sized southeastern city. Teaching program and clinical appointment at UAB available. Call 205-288-4673. Terms negotiable.

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FOR LEASE — Physician's office: 1600 sq. ft. at 109 Upham St., Mobile, Al. 36607. Please contact Dr. H. V. Allen at 476-3760.

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JOURNAL OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and

acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10, Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

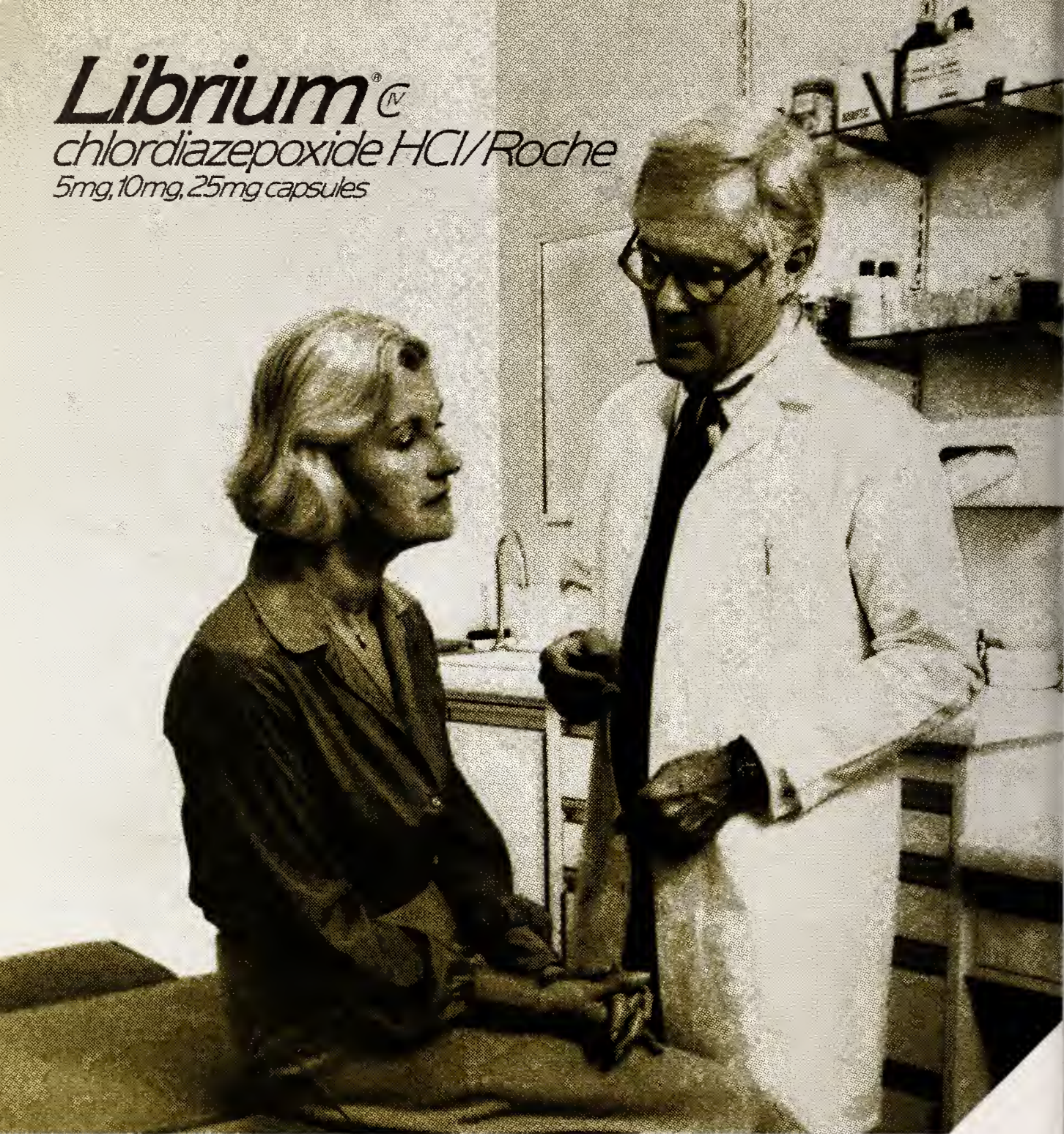
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JANUARY 1979

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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors, psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation, symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other an- tidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over- sedation.

Side Effects: Drowsiness, confusion, diplopia,

hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.



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ABOUT THE COVER

One of the abiding stereotypes about medicine is that the times of the horse & buggy doctor were the good old days, never matched by modern practitioners, who have, lovers of antiquity say, lost the personal touch, the warmth, the empathy and the sense of self-denial doctors had back then. The picture is posed, to illustrate the cliché. Making the house call, at what is actually the Museum of the City of Mobile, is William T. Wright, M.D., former MASA President, whose father did make horse & buggy house calls and, before that, visited his patients on horseback in North Alabama. The buggy, now enshrined in the Museum, was once used by another Mobile doctor. The two Drs. Wright, father and son, span virtually all of this century of Alabama medicine. Their story, or part of it, and how the physician became a target of malpractice litigation in the 1970s, may be found on page 16.

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The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

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FROM THE EXECUTIVE DIRECTOR

Beware Of ROT

A subtle censorship has spread across the public expressions of this and other medical associations in the land.

There are opinions that cannot be made in print, or even orally in official gatherings, because of the threat of litigation. The principal censor now is the Federal Trade Commission, which has arrogated to itself powers never dreamed of in the days of its founding.

Restraint of Trade (ROT), like many another concept that was narrow and laudable in its original intent, has now become so broad in the constructions of FTC and the courts that it can apply to almost any subject.

Chiropractic, for instance. MASA's General Counsel, viewing the predicament of the Pennsylvania Medical Association and of the AMA, accused by chiropractors of denying patients free access to health care, warns that any criticism of that limited-license profession might be construed as ROT.

To physicians who say damn the torpedoes, the General Counsel often replies: "Do you know how much it would cost to defend that kind of suit?"

Federal litigation is now so expensive, the AMA quite reasonably concluded that it could be bankrupted by defending the chiropractors' suit. Imagine the proportionately greater financial devastation to a state association. Pennsylvania physicians, for example, told the House of Delegates in Chicago that it was well for physicians in other states to tell them to hang in there and fight it out, whatever the consequences, but were other states ready to pick up the legal tabs that would have broken Pennsylvania in a short time? The bill has already reached \$500,000 and the case hasn't even gone to trial.

It is even tricky to talk about cost containment; the Justice Department has served ample notice that such discussions might be construed as price-fixing, and even criminal collusion.

If at times *The Alabama M.D.* or the *Journal* seem not to tell all that might be told about a subject, the reason may be that the General Counsel has advised, once again, that discretion is the better part of valor in these days when Big Brother is watching everything organized medicine is doing.

It is this form of censorship through national fear of devastating litigation that adds to the anger and frustration of embattled physicians. All the more reason that now, as never before, they must stick together, reason together and hope for a better day.



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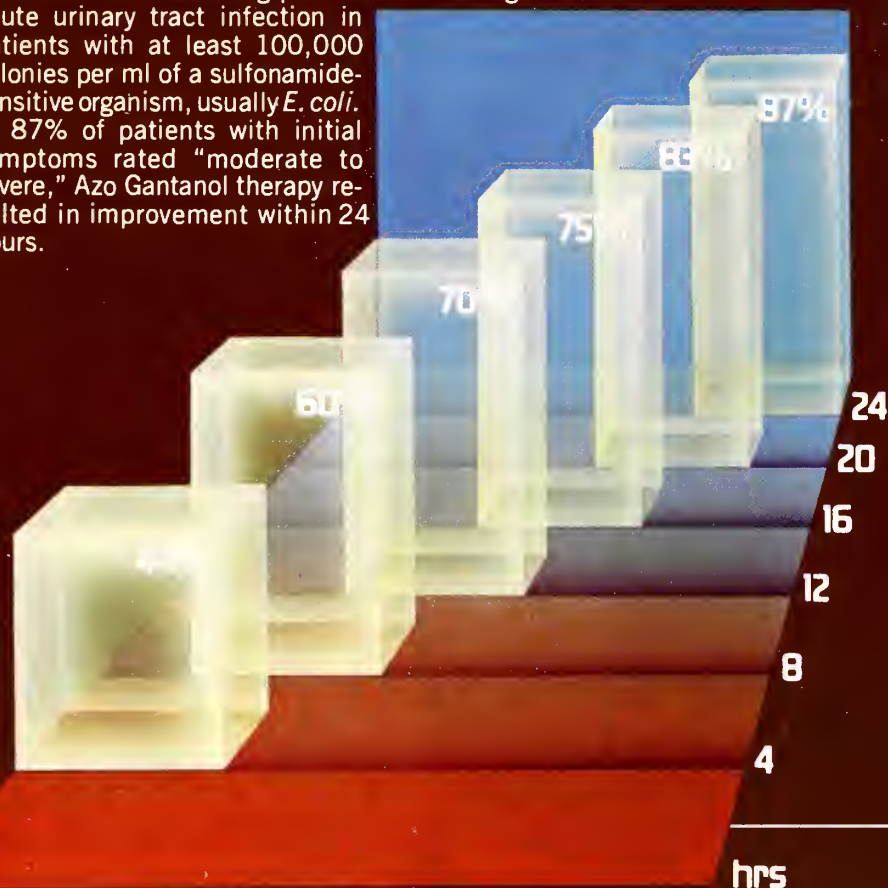
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Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, phot sensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pain, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute painful phase of urinary tract infections. **Usual adult dosage:** 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists causes other than infection should be sought. After relief of pain has been obtained, continue treatment with Gantanol (sulfamethoxazole) may be considered.

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One Man, One Vote In Chicago

Hilary H. Henderson, Jr., M.D.
President



The AMA House of Delegates, meeting in December in Chicago, proved once again that it is responsive to the needs and wishes of the membership. Two controversial items on the agenda illustrate this point, I think:

1. The House rejected, by a 160-86 vote, the recommendation of the AMA Board of Trustees and the Councils on Legislation and Medical Service that the AMA again introduce into Congress early this year its previously approved "Health Insurance Improvement Act."

That proposal would have marked the ninth consecutive year that AMA had before Congress a basic health insurance bill for all Americans.

Instead of approving this, the House responded to demands that the AMA retreat from its 10-year position. The House endorsed an alternative offered by Florida in favor of a limited approach covering only the uninsured and victims of catastrophic illness.

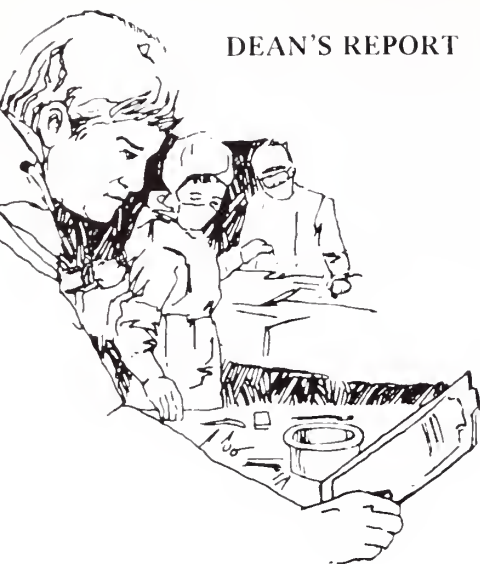
The House supported the position of those who opposed any NHI bill as no longer necessary for a bargaining chip in Washington.

2. The House proved its flexibility on the second major issue, the Pennsylvania chiropractor suit, by supporting the position of the Board of Trustees in its efforts to settle the suit. The Board's actions had been condemned by four specialty societies as unwarranted. The Board decided to settle in Pennsylvania, where it couldn't win, and to stand firm in the Chicago suit, sticking to AMA policy that chiropractic is an "unscientific cult." In any case, nothing changes the physician's basic right to choose his patients.

Although the House was divided on both these issues, it finally arrived at democratic decisions based on the will of the majority of American physicians.

This, in my opinion, speaks well for the kind of representative federation we have in this country. I am personally proud to be part of it.

Hilary H. Henderson Jr.



The Student Coalition For Community Health

By William R. Willard, M.D.*

In 1974, a new to Alabama, innovative and important health program was launched, the Student Coalition for Community Health.

Students at the Wesley Foundation of the University had been reading together Robert Cole's book on out-migration in the South and the oppressive living conditions of the rural poor. The energy and ideas to develop the Coalition came out of the student's dissatisfaction with their University study, its abstractness, its isolation from professional practice, and its insensitivity to the needs of communities within the State.

Students also felt a great desire to test their talents and career plans and especially to be of immediate service rather than waiting for final certification at the end of a lengthy professional education. The Student Coalition for Community Health, as it developed, provided an appropriate context in which students could respond to all of these concerns.

As of the summer of 1978, the Coalition has reached 13 communities, provided some medical services to 9,100 people and involved 136 students from eight colleges and universities in Alabama and five in other states. These students represent a wide variety of disciplines within or related to the health field.

Objectives

The Student Coalition for Community Health has five major objectives:

- 1) to stimulate the community to accept responsibility for its health care needs;
- 2) to provide needed health care services to residents of rural Alabama;
- 3) to provide health education materials to residents of rural Alabama;
- 4) to stimulate community youth to pursue health careers; and
- 5) to provide a vocational experience for Coalition members.

These objectives are met through three types of activities. The first

is a screening examination which includes an history and physical examination supervised by a licensed physician; vision, speech and hearing testing, laboratory work, EKG, pap smears, and at times skin testing for tuberculosis.

The second major type of activity is preventive health services including immunization, health education, counseling of people concerning the rights and benefits to which they may be entitled, if any, through various programs, and nutrition counseling. The third type of activity is community organization to help the communities to develop a structure for finding possible solutions to problems.

Origin Of The Name

This program is called the Student Coalition because it was initiated and has been administered by students who have insisted on being relatively autonomous and making their own basic decisions. However, they have sought and obtained guidance from health professionals at The University of Alabama and other institutions and in local communities. It is a coalition because it brings together students from many disciplines and colleges working with rural people, health professionals, and many community organizations. During the academic year, these students are engaged in planning the program which culminates during the summer as a Health Fair.

The name health fair is used because it is descriptive of the 30-40 students, plus their supervisory physicians, who travel to three or four communities in a summer as a rolling clinic to provide medical screening and referral services, immunization, counseling for rights and benefits, well water testing and health education. It also serves as a vehicle for community organization. These services are condensed into a one-week period followed a little later by a second week. The communities organize to house and feed the team, to provide a site for the project, and to promote wide spread community participation in the program.

A second project and a research course have developed out of the

*Dean, College of Community Health Sciences, The University of Alabama.

Student Coalition for Community Health context in order to deal with issues facing the rural South. The Coalition has plans to create a clearinghouse to coordinate information and services for a growing network of students, communities, institutions and agencies that have been brought together by its projects.

Learning Experience

From the students' standpoint, the participation in the Coalition is a rewarding experience. Most of the students probably are headed for a career in one of the health or health related fields.

The fair provides firsthand experience of living in rural communities in the homes of local citizens, of seeing health problems and needs firsthand, and learning techniques of organization and administration required to conduct a fair. It is relevant to their academic program and supplements it in a unique and vital way.

Two student workers are assigned to each community to contact physicians and local agencies, to arrange a site for the fair such as a local school, to arrange housing for students and a noon meal for all the workers each day and to help line up volunteers.

In addition, the entire health fair team of 30 - 40 students and supervising physicians, visit each community in turn for five days to conduct the screening clinics and then return for a second week. The students have been commended by local citizen leaders for their attitude and conduct in the community and for the work they have done.

Working with local citizen leaders and with University officials in an independent role is a learning and maturing experience in itself. The dialogue among students, involving as it does many disciplines such as medicine, nursing, pharmacy, social work, and health care administration, provides a broad focus for dealing with community issues and is an interdisciplinary experience requiring a true team effort — an experience which too few health professionals have during their segregated professional education.

Broad Objectives

During the planning process, the students and local community leaders develop broad health objectives for the fair with health being defined as anything "which effects one physical, mental or social being." Such a broad definition requires concern for many diverse problems and requires an understanding of the medical care delivery system of the community, community dynamics and social structure. They observe firsthand the how communities establish various health priorities for themselves and they often participate in projects such as recruiting a physician, creating a new community clinic, a town clean-up program, organizing a fire department, rehabilitating a washeteria. These are examples of actual experiences the students have had during the life of the Coalition and there are many others.

The screening has been supervised to date by eight of the full-time faculty members of the College of Community Health Sciences and by local physicians when available. Twelve College of Community Health Science family practice residents have also participated. Patients with defects or illness are referred to local physicians or other appropriate resources. An effort is made to follow these patients to ensure that they receive appropriate care but obviously it is difficult for a student to do a complete or systematic job on this because of time constraints. At least two cases of active tuberculosis and one carcinoma of the cervix along with many more commonplace problems have been detected during a single year.

Projects

Perhaps more significant than the Health Fairs are some community projects which have been stimulated and expedited, at least in part, as result of work of the Coalition. Many of these activities have been initiated or partly planned before the Coalition; however, the health fair gave then added impetus. In some cases the communities gave credit to the Student Coalition for bringing the projects to fruition. Examples of these are as follows:

Cedar Bluff—1975. Soon after the health fair left Cedar Bluff, the townspeople organized a health committee to recruit a doctor for their area. Mr. Curtis Green, Chairman, made contact with a physician in Rome, Georgia and within six months this doctor relocated in Cedar Bluff. Soon after, a pharmacist was located and he began operating a drug store in Cedar Bluff. Mr. Green was elected Mayor in 1976 and has been working hard to improve the area's economy.

Ashville—1977. The town of Ashville recruited a physician and medical technician (husband and wife team) and are constructing a community clinic with the assistance of the county hospital and physicians in Pell City.

McIntosh—1978. McIntosh is a highly industrialized town dominated by two multi-national corporations. The health fair helped bring together the many factions of the town to work together on planning the expenditure of \$63,000 which is available for community projects through the McIntosh Improvement Association. This money had not been expended before because of bitter conflicts among the town's factions.

Duncanville—1975. Duncanville has not shown the initiative or the "success" many of other health fair towns have shown. With the end of the health fair in Duncanville, community members identified a cleaner water system as a primary need. However, the community was unable to respond to this need in a cohesive manner. While the Coalition did not succeed in its goal of community organization in Duncanville, the primary health care extended to the area was not wasted. Duncanville was an important learning experience for the Coalition. Sometimes the best way to help a community is to leave it alone.

Occasionally the students have put off until the last minute obtaining the clearance and cooperation of the local physicians instead of doing it at the beginning of the planning process as they should. This has caused some irritation and, hopefully, it will not occur again.

→ → →

Dean's Report

The program does provide modest stipends for the students involved in the summer activities. Most living expenses are provided by local citizens. Travel and administration plus medical supplies represent the other costs. Funding has come from various sources, initially from the Robert Wood Foundation, later and at various times from the Kendall Fund (United Methodist Church), the Wesley Foundation, Governor Wallace's discretionary funds, and federal funds through CETA (Comprehensive Employment and Training Act).

Other kinds of support have come through The University of Alabama and the Student Government Association, through the University of Alabama in Birmingham, the Tennessee Valley Authority, the State and local health departments and many local agencies.

Both the students involved and The University of Alabama believe that the Student Coalition for Community Health experience has been good for both the students and the local communities. The University is anticipating institutionalizing this program as a permanent one with more staff assistance and supervision from the College of Community Health Sciences. □

Acknowledgement: This article is based on material provided by Robert F. Gloor, M.D., Professor of Community Medicine, College of Community Health Sciences; John E. Shelton, Ph.D., Student Coalition Advisor; and Donald Oakes, 1978 Project Coordinator, Wesley Foundation. Many paragraphs are taken from reports prepared by them.

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Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

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*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).



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Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. Aspirin used concomitantly may decrease Motrin blood levels. Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

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Challenge To Dr. Boshell

Editor, The Journal:

I would like to compliment Dr. Boshell for his excellent article on the diagnosis and treatment of diabetes mellitus at the Diabetes Hospital which appeared in the November issue.

There does appear to be a need for clarification of some areas of Dr. Boshell's discussion, however. Although he carefully develops the requisite conditions for performing a glucose tolerance test, he avoids the crucial question of whether to do the test at all. If the glucose tolerance test is to be considered worthwhile, it must be demonstrated to be (1) specific for diabetes mellitus (within a reasonable period of time all patients with an abnormal test will develop recognizable complications of diabetes mellitus or at least sustained fasting hyperglycemia), and (2) the information obtained must be useful in planning therapy. Can Dr. Boshell substantiate either the specificity of the test or its usefulness?

Also in the article Dr. Boshell appears to advocate a period of hospitalization for the patient with adult on-set diabetes to determine an optimum insulin regimen.

During this time, the patient also receives an intensive education about diabetes mellitus. The tremendous costs of such an evaluation are obvious, but its benefits are undocumented. Although such an approach might be appropriate in a research protocol, it appears premature to present such a program as an alternative to the physicians of Alabama for several reasons:

(1) A twice daily regimen of both regular and intermediate insulin has not been shown to prevent complications of diabetes mellitus more effectively than a single dose of intermediate insulin.

(2) Outpatient evaluation of insulin dose is less expensive, less time consuming, and is adjusted to the patient's actual diet and activity levels.

(3) The long term benefits of an intensive "education" are undocumented.

Glen D. Heggie, M.D.

Assistant Professor

Department of Internal Medicine

University of Alabama

College of Community Health Services

University, Ala.

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Then and Now

*75 Years Of
Alabama Medicine By
Father and Son
With Comments On
The Birth Of
Malpractice*

By Wm. H. McDonald

In 1931, when William Thomas Wright was four years old, he had already established alternate objectives in life. He wanted to be either (1) a truck driver or (2) a doctor.

That he chose the second was not all that sensible in those days. In 1931, some truck drivers were making more money than his physician-father in Berry, Alabama, a town of 600 souls in Fayette County, in the Northwest quadrant of the state.

That inauspicious year, his father, David Hudson Wright, M.D., lost \$300 practicing medicine, and he had been in practice 22 years. The next year, after dismissing his office help, he and his wife managed to eke out \$50. He was relatively fortunate; other physicians in the state had not done so well.

If they were scarcely as affluent as truck drivers, Alabama doctors could at least count on an occasional chicken, ham or tote sack of sweet potatoes — farm barter that passed for fee-for-service then. They could make do without much money.

Those hard-scrabble origins may have helped prepare Dr. Wright's son for the role he was to play 40 years later in helping to save Alabama physicians from a crisis worse in some respects than the 1930s Depression. That was, of course, the Great Malpractice Crisis of the 1970s.

Then And Now

Recalling those days in an interview, William T. Wright, M.D., looked around his comfortably paneled office in Mobile, where he has been in practice since 1954.

On a coat rack conspicuously placed behind his right shoulder hung the saddle bags his father had once used to carry his medicines by horseback over the hills and through the valleys of Fayette County. Dr. Wright the younger is ever mindful of his roots in Alabama medicine.

Down the hallway of Dr. Wright's efficiently laid out offices and treatment rooms, in a corner of the spacious waiting room, was another reminder of the earlier days of Alabama medicine — and old doctor's instrument cabinet filled with the necessary equipment of the day, the surgical instruments, the hand press for squeezing broth from beef stock, a hand centrifuge that could be set up in a farm kitchen for use on a urine specimen, devices for compounding medicines, since drug stores were city oddities in those days, and so on.

"Everything had to be portable," Dr. Wright explains. "By the late 1930s, Daddy even had a portable obstetric table for home deliveries. It had been designed of light metals by an aircraft engineer and an obstetrician. He used disposable drapes.

"During the last 12 years of his life, he had a driver who would set up the table for delivery while he was examining the patient in an adjoining room of the house.

"He delivered 4,000 babies, all home delivery."

The elder Dr. Wright was ahead of his time in other ways as well. He had received his M.D. from Vanderbilt in 1908, starting his practice in the Pea Ridge Community of Fayette County the following year. (Earlier, he had taught school in Boaz.)

A major problem of rural practice then, with few good roads, was communications. The logistic problem of getting to the doctor was a major hurdle in even simple illnesses, and became critical in emergencies.

Dr. Wright's Emergency Network of 1912

After being in practice three years, he decided to invest in the relatively new fangled gadget called a telephone. None of his patients had one and most perhaps had never heard of the thing in 1912 when Dr. Wright set about the task of stringing five lines in all directions from his base phone.

The Pea River community had joined the 20th Century. In fact, it had joined it about 50 years before telephones became generally available in the area.

From all points of the compass, Dr. Wright could be summoned to a sick bed or to the call of an

expectant mother, or to the scene of a farm accident by anyone who made it to one of the phones.

He also used them to prescribe over the phone, when a house call didn't seem required, thus making more efficient use of his precious time. Pea Ridge had as modern a medical emergency system as in any community in the land.

Dr. Wright also acquired the first x-ray machine in the county. When he later moved to nearby Berry, where the younger Dr. Wright first saw the light of day in 1927, he was one of six physicians in town. When he died in 1948, there were only two others. The population had remained static over the years, but the old country doctor was disappearing.

Reflecting on the peaceful times of his father's medical era, the son looked around his Mobile office at all the memorabilia of his life in the teeming port city, at the other end of the state from the Fayette County of his childhood.



Medicine Was Not Threatened In Those Days

"There were no external threats to medicine then," Dr. Wright recalled. "The government wasn't trying to move in and people accepted the fact that their doctor did the best he could with what he had. Nobody sued for bad results, even thought about it. I never heard that Daddy had any malpractice insurance. But even if he did, he never thought about it.

"Take the time in the 1920s when he got a call to rush to the assistance of man who had been badly hurt when a car he was working on fell off the jack in the garage.

"When Daddy got there, he was bleeding to death from his mangled arm. With the help of one of the other mechanics, Daddy hauled him to the work bench, administered drip ether and amputated that arm.

"Well, as it turned out, he got a good result. The patient lived. But if he had died, his family would still have been grateful; Daddy had done all he could.

"Today, you would have to think of all the implications and you just wouldn't do it. Of course, you wouldn't have had all the equipment he carried around in the first place. But even then, would you have done it?"

In his Mobile practice, Dr. Wright still sees many of the former patients of his father, delivered back in the 20s, 30s, and 40s.

Many people from Fayette county, and other predominately rural counties, migrated to the cities before, during and after World War II. It was during the war that Mobile shipyards attracted many from Fayette. They naturally gravitated to the son of the physician they had known and loved back home.

The elder Dr. Wright was active in what was a very progressive medical group of its day, The Southern Railway Surgeons Association. He attended annual meetings of it and The Medical Association of the State of Alabama, in which he became Life Counselor. As late as 1938, the elder Dr. Wright was still keeping abreast of medical knowledge by going off to physician post-graduate studies in such places as Hot Springs, Ark., the CME of the times.

An Office Visit Charge Included Lunch

The changes he saw never cost him his taste for the amenities of southern life. When it came noon time in his often crowded office, Mrs. Wright, or an office assistant, would announce to those still waiting:

"The Doctor is going to lunch now. Would anybody like to join him?"

There were usually three or four hungry patients who accepted the hospitality.

Recalling these fond memories in his Mobile office, his son grinned:

"We never knew who would come for lunch or how many there would be."

He had left all this behind when he graduated from Berry High School in 1943 at 16, and headed for

Tuscaloosa, 40 miles to the South. A hitch in the Army Medical Corps in Florence, Italy, interrupted his studies in 1946-47 but he returned to graduate in 1948. He received his M.D. from the Medical College of Alabama and interned at Mobile's City Hospital 1953-54. He has remained in the port city ever since.

It was probably in the mid-1960s, Dr. Wright recalls, when he had his first serious discussion of malpractice insurance. It was in a doctors' lounge, where several physicians mentioned that their malpractice insurance had just gone up.

"At that time," Dr. Wright recalls, "I think I was paying about \$25 a year for malpractice coverage. I was curious what the increase they were talking about might have been. It couldn't have been much.

"When I got back to the office, I asked my secretary, who was very trustworthy:

"By the way, what do we pay for malpractice insurance?"

"She couldn't recall offhand but said she would look it up.

"She came back very red-faced about two hours later and said, 'Doctor, I'm sorry — I let that lapse about five years ago'."

Going Bare Was A Small Risk Then

He had been going bare without knowing it, such was the small concern just a few years ago for the threat of litigation.

When, why and how did the trouble begin? Dr. Wright is precise on the time and has reflected much on what he believes to be the causes, or some of them, of the great malpractice crisis of the 1970s:

What seeded the public mind, Dr. Wright is convinced, was the emergence of the television medical shows, wherein Drs. Casey, Kildare et al infallibly cured all their patients, no matter how exotic their illness, between commercials.

One of the reasons patients no longer accept bad results, Dr. Wright believes, is the "depersonalization" of medicine. Today, when the doctor puts his patient in a hospital, he may call in an internist, who may call a neurosurgeon, and so on:

"The patients' contact with each of these physicians is very short. They don't have time to develop any real trust in one doctor. The rapport is not what it was when there was only one attending physician."

Suing The Sidewalks In America But Not Britain

"Many patients," he continues, "have the opinion that if they paid their money and things didn't turn out right, somebody must have made a mistake, and that is not necessarily true.

"People in America now *think* litigation — and it's not just doctors and hospitals — it's about everything.

"You know, we sent a team to England to find out why there was no comparable malpractice problem there. The way the team summed it up was this:

CONTINUED ON PAGE 36



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Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spiro-nolactone is used concomitantly, determine serum K⁺ frequently; both can cause K⁺ retention and elevated serum K⁺. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions, nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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Brief Summary INDICATIONS

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Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with autonomic neuropathy, hepatic or renal disease, ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon, hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension, hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION** Dosage must be adjusted to individual patient's needs.

Usual Dosage Bentyl 10 mg capsule and syrup Adults: 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children: 1 capsule or teaspoonful syrup three or four times daily. Infants: ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water.) Bentyl 20 mg Adults: 1 tablet three or four times daily. Bentyl Injection Adults: 2 ml (20 mg) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product information as of October, 1976

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Occipital Neuralgia

By

Charles L. Cox, Jr., M.D.*

George R. Cocks, M.D.†

Summary

The role of conservative treatment, anterior scalenotomy and occipital neurectomy in the treatment of occipital neuralgia is evaluated. The anatomy involved is briefly reviewed to explain how the scalene anticus syndrome is related to occipital headaches.

Occipital nerve pain is a very common cause of severe intractable headache. The greater occipital nerve is the largest purely afferent nerve in the body. Its central connection in the central nervous system, its torturous course in the posterior neck, its proximity to the occipital lymph nodes, and its exposed position to the occipital lymph nodes, and its exposed position over the occiput accounts for the frequency and characteristics of pain arising in the occipital nerve. These factors also contribute to the ease of diagnosis and suggest a logical course of management.

Occipital headache patients are divided into two groups, "occipital neuralgia and occipital neuritis." Each of these have the same type headache, but each of which have certain rather distinctive characteristics.

Occipital neuralgia is the terminology that we use to describe the vicious cycle of pain-spasm-pain syndrome. We use this to differentiate these patients from those whose symptoms are due to local factors involving the greater occipital nerve, which we classify as occipital neuritis.

Occipital neuralgia headache occurs more frequently in women. It usually awakens the patient from sleep early in the morning, but may occur any time of day and may last for several days at a time. It begins in the occiput, usually on one side, with radiation into the retro-orbital area. When

severe, the headache is associated with nausea. After onset the headache frequently spreads to involve the other side of the head, and usually does not respond to oral medication.

It is described by patients as a severe ache, but occasionally, in cases of occipital neuritis due to local irritation of the nerve, it may present as a sharp shooting pain radiating from the occipital area toward the vertex, but usually the pain is a dull, constant, severe throbbing, aching sensation.

Both groups describe the retro-orbital pain as if the eye is about to "pop out of my head." In some cases, it is very difficult initially to accurately assign headaches to a specific group. All patients are started on the same conservative management and the response to treatment frequently clarifies the etiologic factors involved.

Lidocaine Injections

During a headache, due to muscle spasm, physical findings sometimes are quite characteristic with palpable scalene muscle spasm, suboccipital muscle spasm, and occipital nerve tenderness being very obvious. During the pain free interval, however, these findings are frequently almost completely absent. All patients are initially treated with Lidocaine injections around the occipital nerve. Response to an occipital nerve block is considered of great diagnostic importance. Since the greater occipital nerve does not supply the intracranial structures, headaches which are relieved following such a nerve block are considered to be due to extracranial factors and by this simple test intracranial mass lesions, migraine headaches, and other causes of intracranial pain can very simply and easily be differentiated.

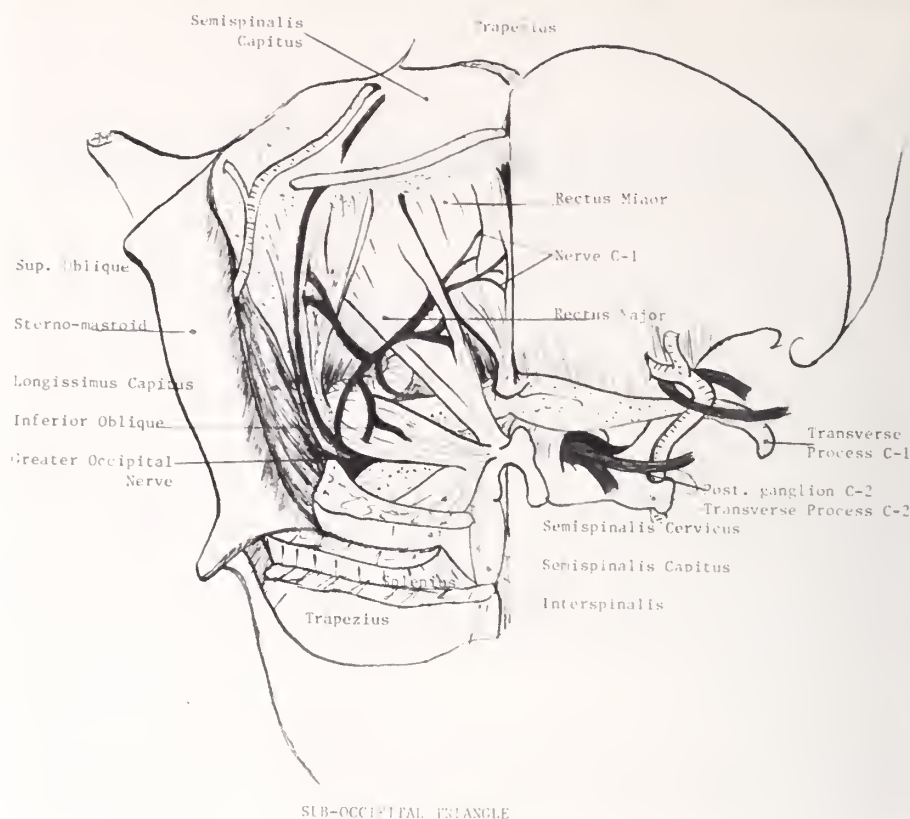
The largest group of patients with occipital headaches is composed of those whose occipital neuralgia is due to muscle spasm in the neck, and is frequently associated with the scalene anticus syndrome. The posterior neck pain has been a neglected component of this syndrome. The scalene anticus syndrome may be either primary

*Department of Surgery, Jackson Hospital & Clinic, 1722 Pine Street, Montgomery, Alabama 36106.

†Department of Neurology, Jackson Hospital & Clinic, 1722 Pine Street, Montgomery, Alabama 36106.

Occipital Neuralgia

Figure 1—
Suboccipital area
illustrates tortuous
course of greater
occipital nerve.



scalene anticus syndrome or secondary to trauma or cervical discongenic disease. It is felt that the muscle spasm of the axial muscles in the posterior and suboccipital area is responsible for the posterior neck symptoms and occipital pain component of the scalene anticus syndrome.

The greater occipital nerve is formed by the posterior primary ramus of the second cervical nerve which passes backward between the atlas and axis in the interval between the inferior oblique capitus and the semispinalis muscle. It then pierces the semispinalis muscle and passes through a small aperture in the aponeurosis of the trapezius muscle to emerge over the occiput as the greater occipital nerve (Fig. 1).

Because of this rather tortuous course it is subjected to irritation and traction by spasm of any of the muscles in the suboccipital and posterior neck area. The posterior primary rami of the third through the sixth cervical roots provide somatic afferent pathways for the posterior neck but more importantly provide somatic efferent pathways to the cervical axial muscles including those muscles through which the greater occipital nerve passes. The corresponding anterior primary rami of the lower cervical nerves contribute to the formation of the brachial plexus. Small motor branches from these nerve roots innervate the scalene muscles. Because of these anatomical relationships, spasm of the scalene muscles can result

in irritation of the motor fibers to the scalene muscle which in turn creates more spasm and also will cause nerve root irritation and irritation of the posterior rami, resulting in spasm of the posterior neck muscles, stretch of the occipital nerve, and occipital neuralgia.

Muscle Anatomy

Swank and Sinone⁸ explained the scalene anticus syndrome complex on the basis of the anatomy of the scalene anticus muscles. From their anatomic investigation, they clearly demonstrated that the tendons of origin of the scalene anticus muscle from the third to the sixth cervical vertebra are in direct relationship to the fourth to the seventh cervical nerve roots. The cervical nerve roots of the brachial plexus pass from the intervertebral foramina along the groove in the transverse process to the top of the process where the tendinous origins of the scalene muscle are in direct contact with the nerve. The tendon passing from the tip of the third process passes over the fourth cervical nerve near the tip of the process. This continues downward until the last tendon arising from the sixth cervical transverse process passes over and is in contact with the seventh cervical nerve.

Gage and Parnell³ reported anatomic dissection in over 100 cadavers and found the upper cords of the brachial plexus passing through the scalene anticus muscle in 30% of the dissections and felt

that this factor played a prominent and significant role in the etiology of scalene anticus syndrome. They also reported that section of the scalene anticus muscle results in detachment of its lower fixed end so that if the muscle goes into spasm it could not become taut and consequently its squeeze effect on the nerve roots was lost.

They also felt that the primary disturbance occurred in the scalene muscle and believed that in the majority of the cases the precipitating factor was trauma which did not need to be severe. They felt that once the spasm was set in motion, cervical nerve root irritation would result in increased spasm and hypertrophy of the scalene muscle which increases the nerve irritation, resulting in a vicious cycle.

Effect Of The 'Squeeze'

There are numerous other publications which substantiate their findings. However, very little attention has been paid in the past to the posterior primary rami and the effect of the "squeeze" on the posterior primary rami and the effect of the "squeeze" on the posterior primary rami of the cervical roots (Fig. 1 and 2).

Knight⁴ reported post-traumatic occipital headaches resulting from relative minor injuries and stated that occipital neuralgia should be suspected when a very large headache follows a very small injury. He and other authors describe referred pain which could arise in transpinous ligament injuries, strains on the intraneural and intervertebral joints and from exacerbation of pre-existing cervical arthritis. He also stated that occipital pain is often seen in association with obvious disc degeneration at C-5, C-6 cervical intervertebral space.

Knox and Mustonen⁵ reported that the pathophysiology of occipital neuralgia is tension of the posterior neck muscles which caused compression and irritation, which produced ischemia of the greater occipital nerve, sending stimuli centrally into the descending tract of the Vth nerve where there is erroneous interpretation that the eye orbit or temporal area is the locus of the disorder producing the pain. They felt that fibers from the second cervical ganglia enter the spinal cord and extend upward intermixing with the fibers and the cells of the descending tract of the Vth cranial nerve and it is these central connections with the descending tract of the Vth nerve which is the probable locus of the neural connection in which pain and pressure stimuli from the posterior neck and head are referred to the eye orbit and temporal area.

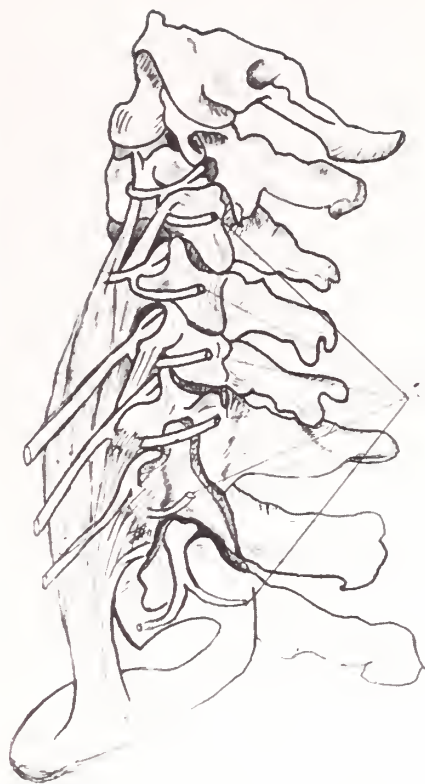


Figure 2—Lateral view illustrating fibers of scalene anticus attached to posterior tubercles and relationship of these fibers of origin to the cervical nerve roots.

Stowell, Hayne, and Cook⁷ report severe occipital headaches related to cervical disc syndrome and scalene anticus syndrome. These were not initially recognized by them as being a part of the scalene syndrome until patients thanked them for relief of headaches following scalene surgery. Occipital headaches have also been reported by Cox¹, Cox and Cocks² as being related to posterior occipital muscle spasm related to the scalene syndrome.

Rib Removal

Roos⁶ has rekindled interest in first rib resection for thoracic outlet syndrome. It would appear that removal of the first rib would very effectively decompress the nerve roots by releasing the lower end of all the scalene muscles. He also reports a complication rate of nearly twenty percent, and good results in approximately 90% of these patients. Our experience with this procedure has been limited but it does appear that the benefits are secondary to release of nerve root pressure rather

TABLE 1
SCALENOTOMIES
Result of Surgery

Result	Number	Percent
Excellent	117	30
Good	223	56
Poor	55	14
Total	395	100

TABLE 2

Primary Neurectomies	38
Neurectomies after Scaleneotomies	54
Previous Neurectomies	3
Total	95

TABLE 3
NEURECTOMIES
Result of Surgery

Result	Number	Percent
Excellent	15	16
Good	71	75
Poor	9	9
Total	95	100

TABLE 4

Neurectomy Pathology	Number	Percent
Neuromata	13	14
Neural and Perineural Fibrosis	40	42
Adherent Lymph Nodes		
(Chronic Lymphadenitis)	22	23
No abnormal Findings	20	21
Total	95	100

than removal of anatomical anomalies such as cervical rib or release of nerve pressure over the first rib.

In our largest group of patients presenting with such occipital neuralgia headaches with radiation into the retro-orbital area, the headaches were due to muscle spasm secondary to scalene anticus syndrome. These people present with headaches which begin in the back of the head and radiate into the retro-orbital and frontal areas. The headaches are associated with neck pain and arm pain. There is tenderness over the occipital nerve and some occipital and scalene anticus muscle spasm and tenderness.

These headaches usually begin in the third,

fourth or fifth decade of life, and occur at frequent intervals, and usually last for days or weeks at a time. They usually do not respond to the usual headache remedies. In fact, they are usually not relieved by large doses of narcotics. These drugs may induce sleep and rest but the headaches may recur when the patient reacts from these medications.

Subjective Pain Relief

Another characteristic of this group of patients is a prompt and sometimes a prolonged response to diagnostic injection of local anesthetic agent around the greater occipital nerve. The subjective relief of the occipital pain is almost immediate followed by a 5-or-10-minute interval during which the frontal and retro-orbital pain is relieved. The subjective relief of symptoms and objective palpable decrease in suboccipital and scalene muscle spasm and tenderness are sometimes rather dramatic. The patients frequently express surprise at such prompt relief of such long enduring headaches. Relief of the pain far outlasts the anesthetic effect of the drug used.

Approximately 50% of this group has responded satisfactorily to conservative management with nerve blocks. In addition muscle relaxants and analgesics, along with reassurance of the benign nature of the disease, frequently are of value. Physiotherapy, cervical traction, and neck collar have not been of much value. Patients who do not respond to conservative measures have been operated and an anterior scalenotomy has been done.

Prior to surgery a complete neurologic evaluation is done including skull x-rays, cervical spine x-rays, electroencephalogram, brain scans and/or EMI scans. In some cases cervical myelograms and arteriograms are also done. Results of this study are presented in Table One. It is hoped by relieving the scalene spasm component of this pain-spasm cycle that we would be able to afford reasonable relief with minimal risk. Complications have been minimal.

Most patients, following anterior scalenotomy, are discharged from the hospital within two or three days and are able to return to their usual occupations within one or two weeks.

The second and smaller group of patients have occipital neuritis due to local factors involving the greater occipital nerve and have had occipital neurectomies done, either as a primary procedure following failure of conservative treatment or as a result of failure of scalenotomy (Table 2).

This group of patients is characterized by prompt relief of headache following an occipital nerve block but the headache recurs shortly after

the effect of the anesthetic agent has worn off. These people usually give a history of onset at a younger age, a few dating their headaches back to six or seven years of age. These headaches are usually unilateral and are associated with minimal arm, shoulder, and hand symptoms.

On physical examination no muscle spasm is noted in the scalene anticus area and they have minimal symptoms of cervical radiculitis. They can be further sub-divided into acute and chronic neuritis. In the acute neuritis there is usually a history of local trauma to the area or findings compatible with acute lymphadenitis involving the occipital lymph nodes. These patients complain of a sharp, shooting type pain confined to the occiput with radiation into the vertex. Following the acute phase some will develop chronic occipital neuralgia with the classic radiation into the retro-orbital area.

Organic disease involving the occipital nerve has been noted in 79% of nerves resected. The pathology noted is presented in Table 4. This has included neuromata, scarring around the nerve, neural fibrosis, and densely adherent occipital lymph nodes. It has also been noted that the aperture through which the nerve passes at the tendinous upper end of the trapezius muscle frequently is found to be compressing the nerve at this point. Results of occipital neurectomies performed on 95 patients are presented in Table 3.

Several technical points should be made concerning the techniques for performing occipital neurectomy. The surgery is done through an obliquely placed incision centered over the lateral attachment of the fascia of the trapezius muscle. The nerve is readily identified at this point. Approximately a 3 cm. section of the nerve is removed. Gentle traction is placed on the nerve and it is transected near its point of emergence through the semi-spinalis capitis. The nerve should not be avulsed because of the possibility of serious injury to the spinal cord.

Several cases which were done elsewhere have been re-operated and a neuroma removed from the nerve. The nerve in these cases had been severed subjacent to the incision and when neuromas formed following the transection of the nerve, the neuromas produced recurrent symptoms beginning approximately three weeks following surgery. This is believed to be due to the neuroma's being exposed over the occiput in such a manner that it is subjected to recurrent trauma. It is felt by removing a section of the nerve and allowing the nerve to retract into the soft tissue of the neck that the difficulty of recurrent phantom pain from occipital neurectomies could be minimized.

Discussion

This study was undertaken as a result of observations made during a previous evaluation of 40 patients who had anterior scalenotomy done for neurovascular compression syndrome of the upper extremity¹. Our conclusions from that project indicated: (1) The commonly employed stretch tests were unreliable (Adson's and Allen's test), (2) nerve root pressure phenomena were more important than vascular compression or brachial plexus compression over the first rib in the production of symptoms, (3) posterior neck pain and occipital neuralgia were a frequent component of the scalene anticus syndrome.

Many patients thanked us for relief of headache that we had not recognized as a part of this syndrome.

Recognizing that any surgery for pain entails a large psychological factor in a sometimes highly suggestible patient, no one has been included in this study until at least a six-month interval after surgery has elapsed. It is felt that the "honeymoon is over" after six months and a more reliable objective evaluation can be made at that time.

The question of adequate control of this study has been considered. Sham surgery has not been done because of ethical factors. What we have done, however, is to operate on one side at a time in people with bilateral headache. The results of this have been quite conclusive with dramatic relief on the operated side and persistent pain on the unoperated side.

Even though our statistics indicate somewhat better results following neurectomy, we still favor anterior scalenotomy as a primary procedure, when indicated, because of lack of undesirable symptoms following this procedure. We have had no long-term morbidity following scalene surgery. Occipital neurectomy, on the other hand, is always associated with hypesthesia and sometimes with dysesthesia. With neurectomy we initially achieve almost 100% relief of headache, but unfortunately, with the formation of the neuroma on the end of the severed nerve, symptoms recur in about 10% of patients beginning about three weeks postoperatively. When this is also associated with dysesthesia we have, in fact, made the patients worse than they were before surgery.

Summary

In the past 15 years over 1,000 patients with occipital neuralgia have been evaluated and treated. Three hundred ninety-five have been subjected to anterior scalenotomy and 95 have had occipital neurectomies. The scalene anticus syndrome is

CONTINUED ON PAGE 32

COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting on Nov. 15, 1978:

- Added Legionnaires Disease and histoplasmosis to the list of reportable diseases, effective immediately.
- Acknowledged the placement of the controlled substance PCP (N-ethyl-1-phenylcyclohexylamine and 1-(1-phenylcyclohexyl)pyrrolidine) into Schedule I, effective Oct. 25, 1978, by Federal action with no objection expressed from the State Committee of Public Health.
- Received the full text copy of the budget request for 1980 for the Health Department.
- Was advised of the release of \$1.5 million of the current conditional appropriation by Gov. George C. Wallace, through the State Budget Officer, Mr. James Raiford.
- Was advised of a request for the release of \$105,558 conditional appropriation to continue the hypothyroid screening program. This has proven to be a very cost-effective case-finding program.
- Was advised of the epizootic of rabies in Southeast Alabama and the concentration in raccoons and control measures that are being enhanced in the nine counties of Southeast Alabama.
- Was advised that routine mouse inoculation in the laboratory was no longer indicated and has been discontinued. This recommendation is supported by laboratory consultation with the Center for Disease Control in Atlanta.
- Received information on the revision of Section 1122 Procedures Manual and concurred in a revision of the initial notification of partnership agencies.
- Approved bill revisions for the Certification of Need Law for consideration by the Legislature as recommended and required by DHEW.
- Gave favorable findings and recommendations to the Children's Hospital, Birmingham, for four new dialysis units, renovation and expansion.
- Concurred with the Birmingham Regional Health Systems Agency for favorable findings and recommendations for a proposed parking deck of 720 spaces at Baptist Medical Center, Montclair, Birmingham.
- Concurred with the Southwest Alabama Health Planning Council for adverse findings and recommendations for the construction of a new 120-bed nursing home by South Alabama Nursing Home, Mobile.
- Concurred with adverse findings and recommendations of the Southwest Alabama Health Planning Council for proposed construction of a new 215-bed facility in Mobile known as the Southwest Alabama Heart and Cancer Center, Inc.
- Approved the I.V. Fluid/Drug Supply-Resupply Program applications for Emergency Medical Service units for 62 facilities.
- Was advised of rubella baseline titer services being provided to physicians at cost where suitable services are not easily available.
- Reversed its approval for the reporting of Juvenile Onset Diabetes to the University of Alabama and declared Juvenile Onset Diabetes a reportable disease to the State Health Department. □

Tenuate®
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma, Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychological dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy.* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children.* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride) One 25 mg tablet three times daily, one hour before meals, and in mid evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to

MERRELL-NATIONAL LABORATORIES

Division of Richardson-Merrell Inc

Cincinnati, Ohio 45215, U.S.A.

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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complicating factor...
or just uncomplicated overweight.**

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A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

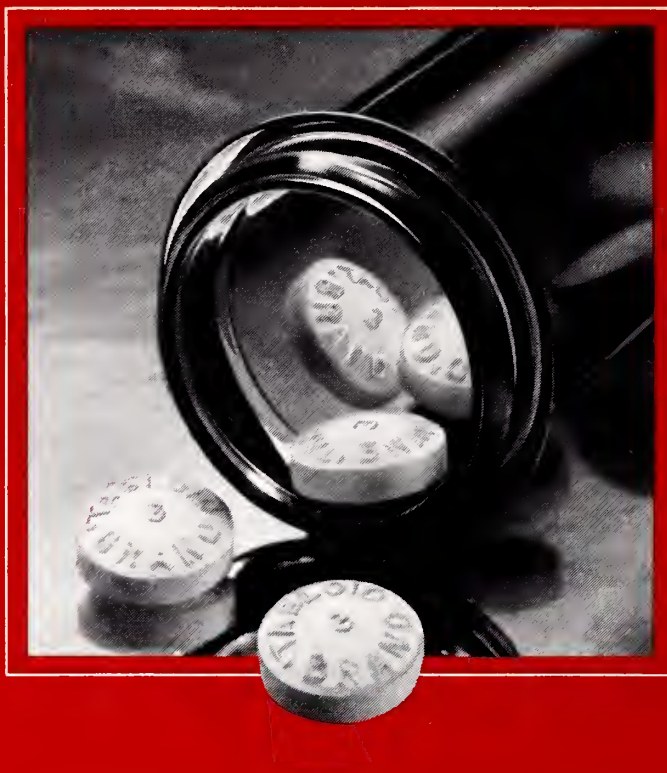
The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.¹ And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."² Compared with the amphetamines, diethylpropion has minimal potential for abuse.

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And it's responsible medicine.**

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For prescribing information see opposite page



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How To Keep Your Boss's CME Report Card

by George D. Oetting, Ed.D., and Dee Kimbrough, MASA Education Department

Attention all MASA members— Please tear out this article immediately and pass it on to your wife, secretary, nurse, or whomever you have delegated the responsibility to keep your CME records. If you maintain your own records, please proceed reading this article; otherwise stop — you are not authorized to go further — this is private talk between CME record-keepers.

The Initial Passing of the Buck to You— Judging from the frantic phone calls we get in the MASA Education Department from secretaries, the delegation of CME record keeping responsibility usually follows this scenario: The boss comes in with a stack of crumpled attendance certificates, some undecipherable personal notes relating to CME meetings and possibly an outdated AMA Physician's Recognition form. Comments such as "I need to start keeping track of my CME - would you set up a file and do this for me?" usually follow - then a quick exit by the boss - who may also mumble various curses at the AMA, MASA or others for "those Mickey Mouse CME paperwork requirements" as he goes out the door.

So there you are, with a new task and possibly little knowledge of this area except that you now know that "CME" stands for continuing medical education. What follows are tips and suggestions to help you become an A-1 CME record keeper.

1. *Get a good understanding of his CME requirements:* This will take some time and effort, but it will be worth it.

After much discussion and debate, a CME mandate for members of the Medical Association (including your boss) was adopted. To maintain membership in MASA, he or she will need to participate in enough CME activities to attain the AMA Physician's Recognition Award (PRA) or an approved equivalent program.

The PRA requires 150 hours of CME over a three-year period. This can be achieved by the physician in any manner desired, e.g. 50 hours per year, all in the last year, or whatever pattern works best for the individual.

In addition to the PRA, the national CME programs of the following nine specialties are also approved as satisfying the MASA CME membership requirement: American Academy of Dermatology (AAD); American of Family Physicians (AAFP); American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CSN); American College of Emergency Physicians (ACEP); American College of Obstetricians and Gynecologists (ACOG); American College of Radiology (ACR); American Psychiatric Association (APA); American Society of Clinical Pathologists/College of American Pathologists (ASCP/CAP); and American Society of Colon and Rectal Surgeons (ASCRS).

This requirement becomes effective July 1, 1979, so the first mandatory three-year period for all members will cover July 1, 1979 - July 1, 1982.

At the end of that period, your boss should have completed at least 150 hours of CME and reported this to the AMA, AAFP, or other approved agency which issues the CME certification. (MASA does not review individual hours, attendance records, etc. — you should submit required documents to the certifying agency. All we need is information on who certified his efforts and the period of certification.) Many MASA members have already started their three-year period; it is not necessary to wait until July 1979 to begin.

2. *Find out how your boss plans to meet this CME requirement* — either the AMA or one of those national specialties listed above. Write to the organization and get the CME information brochures and forms needed. Quite often your boss may have these materials al-

ready, or at least the address to write to.

3. *Start a file to record the CME activities—* This is probably the most crucial part of the service you can perform. Find out the format required to report the CME activities, and learn exactly how to make the proper entries. It is most important that these entries be *entered promptly, as soon as the CME activity is completed.* Much time is wasted in many medical offices frantically searching for CME records long after the activity is completed. Therefore, "train" your boss to automatically let you know when he has participated in one of the kinds of activities for which CME credit is available. Also, when possible, get letters or certificates of completion proving attendance, which can be filed as documentation of this record. Properly kept records will greatly help to make the CME record keeping business as painless as possible.

4. *Insure credit is gotten for all possible types of CME activities.* Each of the agencies which can issue the CME certification have slightly different requirements. In general however, the following types of educational activities can be counted for credit: (a) Attendance of educational meetings, conferences, seminars, etc.; (b) teaching of medical students, other doctors or allied health professionals; (c) writing of books, journal articles or the presenting of exhibits at a medical meeting; (d) self-study activities such as the reading of articles, viewing of audiovisual presentations, etc.; (e) consultation with other physicians and attendance at medical meetings concerned with the review and evaluation of patient care; and (f) self-assessment programs with tests and self-study guides.

Those keeping records for the AMA PRA certificate should note that CME activities have been put into the following categories:

CONTINUED ON PAGE 32

CME REPORT CARD

CONTINUED FROM PAGE 31

I—Programs of CME accredited organizations

II—Scientific meetings of non-accredited medical organizations

III—Medical teaching

IV—Preparing articles and books

V—Self-study of tapes, journals, and participation in audits and patient care records.

If you are in doubt about the correct category, you may contact the AMA Department of Physician Credentials and Qualifications, 535 N. Dearborn St., Chicago, Ill. 60610 or (312) 751-6294 for further help.

5. *Sending your boss's report card to MASA*—In mid 1979, the MASA Education Department will be contacting each MASA member to find out how he or she plans to meet this membership requirement. Please remember, all we need is information on how your boss plans to meet the CME requirement (a copy of his PRA certificate, etc.). We do *not* need individual attendance certificates or records of CME hours. These, if required, should be sent to the approval organization giving the CME certificate.

6. *Call us for help*—Any time you are confused about these things, don't hesitate to give us a call on our toll-free number (1-800-392-5668). We will try to help and will always lend a sympathetic ear.

OCCIPITAL NEURALGIA

CONTINUED FROM PAGE 27

responsible for the largest percentage of these patients. It is felt that the posterior primary rami of the cervical nerves are irritated by spasms of the scalene anticus muscle and this produces sub-occipital muscle spasm and occipital neuralgia. The second group of patients had primary disease involving the occipital nerve and these patients required occipital neurectomies. It is emphasized that a trial of conservative management should be undertaken prior to surgery for occipital neuralgia.

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LOCATIONS WANTED (Physicians interested in locating in Alabama)

CARDIOLOGY: Age 30; Bowman Gray, 1974; seeking practice in Cardiology. Available July 1979. LW-09178.

CARDIOVASCULAR DISEASES: Age 30; Bowman Gray-Wake Forest, 1974; American Board Certified; will be American Board Eligible in 1979; seeking single specialty group, multi-specialty group or partnership. Available as of July 1979. LW-13833.

DERMATOLOGY/INTERNAL MEDICINE: Age 31; Michigan State; 1974; will be American Board Eligible in 1979; seeking single specialty group, multi-specialty group or partnership. Available as of July 1979. LW-13723.

EMERGENCY MEDICINE/INTERNAL MEDICINE: Age 29; Louisiana State University, 1975; Board Eligible in Internal Medicine; seeking emergency practice in a town of 30,000 population and above. Available for practice now. LW-11278.

GASTROENTEROLOGY: Age 33; Case Western Reserve, 1971; American Board Certified; seeking practice in specialty in a town with a population of 20,000 to 100,000. Available July 1979. LW-11378.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 29; Ohio State, 1974; National Board Certified; American Board Certified; American Board Eligible in 1979; seeking single specialty group, partnership or multispecialty group. Available July 1979. LW-13592.

GENERAL PRACTICE: Age 37; University of Louisville, 1967; American Board Certified; seeking general, assistant or associate practice preferably in the Mobile, Montgomery, Birmingham or Huntsville areas. Available September 1978. LW-14129.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02.

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03.

INTERNAL MEDICINE: Age 36; Medical College of Georgia, 1973; American Board Certified in Internal Medicine; seeking practice in specialty preferably in the southern part of Alabama. Date available for practice is open. LW-11178.

OBSTETRICS & GYNECOLOGY: Age 30; Meharry Medical College, 1973; will be American Board Eligible in 1979; seeking practice in partnership, single specialty group or multi-specialty group. Available as of July 1979. LW-13835.

OPHTHALMOLOGY: Age 30; St. Louis University, 1974; National Board Certified; American Board Eligible; seeking solo, partnership or research. Available January 1979. LW-12416.

CARDIOVASCULAR SURGERY/GENERAL SURGERY: Age 35; University of Alabama, 1971; American Board Certified;

will be American Board Eligible in 1979; seeking a practice in solo, partnership or research. Available July 1979. LW-13665.

ORTHOPEDIC SURGEON: Age 31; Medical College of Georgia, 1972; seeking practice in town of 50,000 population. Available August 1979. LW-701.

ORTHOPEDIC SURGEON: Age 30; University of Tennessee, 1973; American Board Certified; seeking practice in specialty in a town with a population of 15,000 or greater. Available for practice January 1980. LW-11478.

ORTHOPEDIC SURGERY/HAND SURGERY: Age 32; Ohio State University, 1972; National Board Certified; American Board Eligible; seeking single specialty group or partnership. Available July 1979. LW-13012.

ORTHOPEDICS: Age 30; University of Alabama, 1973; National Board; seeking practice in the Northern section of Alabama in a town of 30,000 or more population. Available July 1979. LW-09378.

GENERAL SURGERY/GENERAL PRACTICE: Age 46; University of Maryland, 1968; American Board Eligible; seeking practice in partnership, multi-specialty group or emergency room. Available as of December 1978. LW-12085.

PHYSICIANS WANTED (Opportunities for Practice)

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo

PSYCHIATRY: Age 28; University of Iowa, 1976; American Board Eligible in June 1979; seeking practice in specialty or private practice. Available July 1979. LW-09578.

GENERAL SURGERY: Age 34; seeking practice in specialty in a town of 40,000 population. Available as of September 1979. LW-11578.

SURGEON: Age 31; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400.

SURGEON/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single specialty group or solo. Available July 1979. LW-12031.

SURGEON: Age 34; Vanderbilt, 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401.

UROLOGY: Age 30; Yale University 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800.

UROLOGY: Age 31; New York Medical College, 1974; seeking practice in a group, partnership or solo. Available July 1, 1979. LW-07278.

working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles — population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,300 population; trade area less than 10,000; south central Alabama; one semi-retired physician in town; clinic available equipped for two physicians; commuter town; nearest hospitals 15 miles; nearest metro area 30 miles with 200,000 population; 5 churches, 4 schools. PW-09278.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.

7% of the population may be harboring latent or dormant tuberculosis*

**Are you testing for it during
routine office physicals?**

Based on a national estimate of 15 million tuberculin reactors.
Stead, W.W. and Bates, J., in Harrison's Principles of Medicine,
8th Edition, 1977, McGraw-Hill, p. 900.



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An important check in every checkup.

A system, not just a test — supplied with patented induration indicator cards in English or Spanish — simplifies recording and record keeping.

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- Fast — only seconds to perform — can be read in 48-72 hours.



Precautions: Tuberculin testing should be done with caution in persons with active tuberculosis. However, activation of quiescent lesions is rare.

Although clinical allergy to acacia is very rare, this product contains some acacia as a stabilizer and should be used with caution in patients with known allergy to this component. Reactivity to the test may be suppressed in patients who are receiving corticosteroids or immunosuppressive agents, or those who have recently been vaccinated with live virus vaccine such as measles.

With a positive reaction, further diagnostic procedures must be considered. These may include x-ray of the chest, microbiologic examinations of sputa and other

specimens, and confirmation of the positive TINE TEST using the Mantoux method. In general, the TINE TEST does not need to be repeated. Antituberculous chemotherapy should not be instituted solely on the basis of a single positive TINE TEST.

Adverse Reactions: Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons. Pain, pruritus and discomfort at the test site may be relieved by cold packs or by a topical glucocorticoid ointment or cream. Transient bleeding may be observed at a puncture site and is of no significance.

Reference: Diagnostic Standards and Classification of Tuberculosis. National Tuberculosis and Respiratory Disease Association, N. Y. 1969



LEDERLE LABORATORIES DIVISION, American Cyanamid Company, Pearl River, New York 10965

Then and Now

CONTINUED FROM PAGE 18

"When a man in England walks down a sidewalk and stumbles in a hole, he gets himself up and curses the bloody sidewalk. In America, that same man would get up and find who owns the sidewalk so he would know whom to sue....

"The same thing applies to product liability and the health care system. If things go wrong, if the patient doesn't get the results he expected and for which he (or somebody) paid, then he thinks about suing. All too often, he does sue."

Malpractice And Maloccurrence

"If you are going to solve the problem of malpractice in this country, you have to differentiate between malpractice and maloccurrence," Dr. Wrights says.

"If you can make that distinction, then you can say who is entitled to what. I don't mean to say there aren't some patients entitled to some malpractice settlement, because no doubt there are such cases.

"But simply on the basis of a bad result, you can't draw a conclusion that there was malpractice. And yet that is the conclusion that is being drawn.

"One good example is the tavern law, the dram law. In California there was a settlement of, I think, \$1.5 million because a person had an accident after leaving a tavern. It was stated in the decision that the tavern owner had served that person too many drinks.

"It's an example that it's not just us in medicine — that's just one example of the problem.

All Of A Sudden It Hit The Fan

"When I became President-elect of the Medical Association, everything looked rosy, as far as we thought. We had a good arrangement with our malpractice carrier, Employers Mutual of Wausau. They had been very cooperative. Then, for a number of reasons, they decided rather abruptly to get out of the business. One of the biggest reasons apparently was the New York situation where they had lost a great deal of money in the malpractice coverage they had provided in the state for 25 or 30 years.

"They also had some problems as far as product liability was concerned.

"The first rumblings came when I first came in as President. We had a meeting with Employers Mutual in Birmingham and they informed us they were going to have to get out of the business entirely, and that included Alabama, and that they were going to do this on just a few months notice. We had some rather hard-nosed negotiations and we asked for an additional year to get an alternative.

"I will always feel very kindly toward Employers Mutual because they did grant us this year and gave us time.

"We then searched the market by contacting every insurance company that had any possibility of covering us and asked that they cover our physicians. (In all, 60 insurance companies were contacted by letter, or by personal visit. No takers.) We did not receive any favorable reply from any insurance company.

"Some we called, some we wrote, some we went to see. The next step was then to share our experience with others that had been faced with similar situations.

"So we met with the state medical officials from all the other states. This was done on several occasions — in Chicago, in Hawaii. We had extensive sessions. It reminded me of very much of an old-time testifying at a brush arbor meeting in this country because each person representing each state would get up and tell what the situation was in their state. I think the state that I identified with most, and the one that helped me most to understand it, was New Mexico.

When The Second A-bomb Rocked New Mexico

"The President of the New Mexico state association told us that they had one of the best malpractice experiences of any state in the nation. They had a joint arbitration panel with the attorneys there that had been written up in the medical journals and legal journals for several years.

"The year prior to this, they had received a 15% reduction in their malpractice insurance rate and a commendation from the company that had their policies, for their good record.

"The New Mexico Association President stated then that this year (year of the meeting) they would have a substantial *raise* in their premium rates and that this was not based on any increased loss during this period of time.

"He said that their state Board of Censors met to decide what to do about this. During the meeting, they received a telegram from the insurance company that they were cancelling them effective that year — which only gave them a few weeks to find another carrier, or to self-insure.

"In looking at this example, everyone has to be aware of being insured by someone else because they can pull the rug out from under you without any notice, just as they did in New Mexico. If you will study New Mexico's record over the past 20 years you will discover that this is the model state in the nation.

"If you look at the situation and realize what small numbers that state has — I believe in the neighborhood of 1,000 physicians — you will realize that their situation was even more critical than ours because in the crash course we were taking in trying to study the feasibility of setting up a company, we realized that all the advice we got was that you needed close

to 3,000 members if you really want to have a good solid base and a good statistical risk to average from.

"Of course, New Mexico did not have that. In our state we certainly did have a bare minimum. I think we need to have a good sound number."

Question: Where did you get the number 3,000?

"3,000 was told to us by actuarial studies that we received at these meetings we went to. We interchanged ideas with every state. Of course we considered at that time the possibility of several states going together to form a company. New Mexico, Georgia. We talked with New Mexico; we talked with Georgia; and we looked into the feasibility of having a five-or-six state coalition to form a company.

"The biggest drawback we found to that was the insurance laws vary so much from state to state that we would encounter many technical problems in trying to unify a company across the state lines.

"We found that in some areas — for instance, California — there were several doctor-owned companies that were set up, some that were even competing with each other for the same policy holder and some at higher rates than others.

"A person has to realize that the easiest way we could have gone into this company would have been to offer a doctor a limit of \$100,000 liability.

"If we had done that, we would not have had to raise nearly as much capital, we would not have had to pay nearly as much interest on the borrowed capital that we were paying on now, and we could have offered \$100,00 at a very low and competitive rate.

First To Offer \$1,000,000

"We are, to my knowledge, the only state, doctor-owned organization that has ever started by offering a million dollars. The other companies that have tried to go above that \$100,000 have done this through the very expensive route of co-insurance.

"We met for a number of days in Chicago with a number of people from different states discussing the feasibility of self-insurance.

"We then thought it would be more practical for us to pay a percentage to an established insurance company to operate our company. There are a number of drawbacks to this. But I was initially for this at the time.

"In retrospect I realize that would not have been as wise because we would have been dependent on someone else. Now we can monitor our own system, we can try to control our own losses and whatever profits there are will ultimately be ours as members of this Mutual company rather than the benefits going to an outside insurance company..."

The officers who went to Chicago were the president, the president-elect, chairman of the Board of Censors, and A. Derrill Crowe, M.D.

"To give you some idea of what that would mean,



the best offer we had was about 12% of the premium dollar would go for administering the company. The company is now being operated at less than 5%, which indicates that the 7% difference is being saved by us and this can mean one of two things:

"It can mean either a reduced premium, or an increased limit of liability, or a combination of both, and that's not the only profit of self-ownership.

"Now some people may say, why can another company offer us insurance cheaper than we do?

"Well, in order to start this company, we had to do one of three things. No. 1, we could offer a very small limit of liability with a small amount of front-end capital. Or, we could put in a substantial amount of money to start the company and by that I mean each one of us could have put up, let's say, \$20,000, and we could have had lower premiums. Or we could borrow the money for a good limit of liability, which is a million dollars, and we would have had to pay interest on that money.

"Everyone should realize that a fair part of the premium they are paying to Mutual Assurance now is for the interest on the money that we borrowed in order to offer them good protection. Ultimately, as soon as the loan is reduced, I see no reason the premium cannot be reduced, provided we have a good loss experience rate, which I certainly hope we will have.

PLEASE TURN PAGE

Question: What would be the danger of a physician who doesn't know this history, being seduced by a commercial carrier coming back into the state?

"I think there are several things to be considered in looking at commercial carriers that may come back into the state.

"First of all, let's compare that to a physician who says that I will only see patients between 10 a.m. and noon and 2 p.m. and 4 p.m. I will not take night calls. I will not take any telephone calls. All I want is the very cream of the crop. I just want to work these selected hours. I don't want any work on Wednesday. I don't want any work on Saturdays. I don't want any work on Sundays. And I don't want to work in the summer time.

"When you consider this doctor who is working these ideal hours, not taking telephone calls, not making night calls, then you can compare that to an insurance company that simply says they want to write only the best risk doctors.

"I don't mean the doctors that are not guilty of malpractice but those that are in family practice, internal medicine, rather than those in obstetrics, surgery, orthopedics — this sort of thing.

"So I think that if you look at the commercial companies that will write any good risk physician regardless of the type practice he has.

"The second thing to be considered is that even if they do write all classes of physicians, remember New Mexico's example — that regardless of how well you perform in your medical practice, in your setting, that any commercial carrier can cancel you at any time.

"And it doesn't have to be what happens in your area. It can be like our own story, that what happened in New York caused Wausau to leave the market in Alabama.

"In the 1970s the malpractice crisis hit. In the year between when I became President-elect and President, it went from lovely to unlovely."

Question: Here in 1978, then, the situation is such that commercial carriers can get back in and make a fast buck? Is that the situation?

"Many of the insurance carriers got out of the business because it was difficult for them to project what would happen three to five years in the future. None of them offered us any insurance. I think now some of the carriers think they acted in haste and maybe they should come back and skim the cream off some of our easier dollars, Categories 1 and 2.

"I think the only way our insurance company could

have any problem is for us to monitor it very poorly; or that physicians would be tempted to go to a commercial carrier that is not doctor-owned, that is not doctor-controlled, simply because he could save a few dollars in premiums.

"And, remember, the reason commercial carriers can do that is that we are paying interest on the money to capitalize this company. They are not. They've already made their dollars, they already have their capital reserves, so they don't have to figure the interest in their premium. We do.

"So if you want to be short-sighted and realize that two or three years down the road, or even several months down the road, they could cancel you, then the thing to do, of course, is to go the cheaper route.

"But if that happens, and you let your own company down, then you have lost what we worked so hard to build up — and that is a good sound company that is well operated.

"We should, in the future — if things go well, with this company, if we monitor it well, if the physicians cooperate in every way — we should be looking at reduced premiums somewhere down the line."

"But we have to maintain adequate capital reserves in the early stages of this company. The worst thing we could do at this time would be to reduce premiums and make the company unsound and unsafe.

"I think that if you look at a 10-year period or even a much shorter period, the Alabama physician would come out better with Mutual Assurance.

"I think if you look at a two-or-three year period, and to heck with the future attitude, why you might come out better with a commercial carrier rather than our company.

"One of the hardest things to get physicians to do is to get them to read something, to study it, and to understand it.

"A physician is plagued with overwork. Most of them have very little time for reading. How do you get them to understand that this is very sound, that there have been thousands and thousands of man hours figuring out exactly what's best to help HIM, the individual doctor in practice.

"But most of the time they don't take time to read this, they don't take time to understand it.

"And I can understand that. There are thousands of pieces of mail that come across our desks every month. There are many articles, many are marked 'Personal,' many are marked 'Important,' so what IS important:

"THIS IS IMPORTANT — THE SURVIVAL OF INDEPENDENT MEDICINE." □



"THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

—Dr. William Felts, Past President,
American Society of Internal Medicine



More and more physicians today are beginning to realize the extent of the economic influence they have, and are finding ways of holding costs down.

A number of studies show that the more physicians *know* about costs, the more they try to *reduce* them.* And this reduction can be done without reducing the quality of care to the patient.

How are they doing this? As a start they have become thoroughly familiar with the costs they incur on behalf of their patients. They know how much an X-ray costs, how much their

hospital charges for routine lab tests. They're requesting copies of patients' hospital bills. And asking their hospitals to print the charges for diagnostic tests right on the order sheet.

What else are physicians doing? Minimizing their patients' hospital stays, whenever possible. Reevaluating routine admissions procedures. Questioning the real need of the diagnostic tests they order for their patients. Avoiding duplicate testing. Trying to discourage their patients' demands for unnecessary medication, treatment or hospitalization. Compiling daily logs of their medical decisions and what they cost. And more.

More physicians today realize what a tough problem we're all faced with. They know this is a challenge for medicine. And that physicians are in the best position to deal with and solve the problem.

*PATIENT CARE Magazine—Outlook 1977 "Face-Off: Cost Containment vs. Chaos," January 1, 1977

Lyle CB, et al. "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

Schroeder SA, et al. "Use of laboratory tests and pharmaceuticals: variation among physicians and effect of cost audit on subsequent use," JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 225 (Aug. 20, 1973), 969-73.



Blue Cross
Blue Shield
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Mrs. Aubrey E. Terry
President, AMASA

The Choice Is Ours

More than 40 years ago a certain man was rising rapidly from relative obscurity to become a well known world figure. He was to dictate, dominate and direct an onslaught of military power like never seen before. Most of his subsequent conquests were rapid, overwhelming, often destructive; and if he had not made an occasional blunder or been the recipient of some bad luck, many people still feel he might have conquered the world.

Even though he did not quite reach his goal, the consequences of his exploits, and of those who later joined his cause were not all just immediate or short term. Many scars resulting from that era still remain with us today.

I do not fully understand how this man rose to power. But I can know that at some point in time his position of leadership became so powerful and unquestioned that near blind allegiance to his cause was demanded and received. He had his people well versed, his armies organized for rapid movement and it is certainly understandable that time measured in minutes, hours and days became of the essence for those who would oppose so strong a force.

In order to meet the challenge at hand, rapid training and mobilization of the best this country had to offer was a must. Mass production almost suddenly became a necessity with little time left for consideration of cost. Large scale governmental entrance into the field of finance and productivity was demanded. The idea of "cost plus" was to nearly remove the idea of "cost containment;" and soon this way of doing a major portion of our business was well accepted by a majority of our citizens, and especially by our elected national leaders. In fact, this method of spending worked so smoothly that after World War II little effective effort for returning to pre-war ways of finance could be mustered.

So with more government spending came more and more government control, likely helping to foster the idea of limiting individual responsibility. In time possibly less personal fiscal restraint may have helped to promote the idea of less restraint in other more important areas of our lives.

As opposed to some other countries, in our past we have been blessed that no one person has ruled this nation. Most of our lead-

ers have been and will likely remain susceptible to considerable public preference; yet we are aware of the inherent limitations of strength that can be projected by one individual. We also know one must first become available for personal participation before entering into an appropriate organized effort; and today this effort is needed as much as anytime in our past.

Each year we have opportunities to show our interest in making an attempt for improvement of our homes, communities and state. Now we can encourage MASA members to visit with Alabama's congressional delegation in Washington, D.C., and join our spouse on Feb. 4-5, 1979, for this special occasion.

This is an example of one good choice we can make so that ideas can be conveyed concerning health related issues; and an interest in better functioning processes of government can be shown.

Hettre

POSITIONS AVAILABLE

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7545, evening hours 553-2198.

FAMILY PHYSICIANS—Two (2) General Surgeon one (1) either or two offices in Mobile. Flexible arrangements in a very small group. G. L. Spafford, P.O. Box 160272, Mobile, AL 36616.

ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

FP's, Ala. & Missouri, \$40,000 guarantee, moving, free rent, other: C.V. to Dr. R. E. Wiltsie, P.O. Box 57026, Birmingham, Ala. 35209.

CLINICAL PHYSICIAN: The Mobile County Health Department (Alabama) is seeking applicants for the position of Clinical Physician. Mobile County is a rapidly growing county located on the Gulf of Mexico with a population of over 300,000 persons. The Health Department is located in the City of Mobile (Population 200,000) and provides a full range of services. Applicant must be an M.D. and qualified to be licensed in the State of Alabama. Starting salary \$29,340, eligible in six (6) months for a merit increase, and annual increases thereafter. Maximum \$39,312. Excellent fringe benefits. Submit Curriculum Vitae to: Mr. B. V. Miller, Personnel Director, Mobile County Health Department, P. O. Box 2867, Mobile, Alabama 36601. An Equal Opportunity/Affirmative Action Employer.

PHYSICIANS

Opportunities in the Southeast

AMI, The International Health Care Services Company, has practice opportunities for physicians in expanding hospitals in rural and metropolitan areas for physicians in the following areas of specialization:

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POSITIONS AVAILABLE

PUBLIC HEALTH PEDIATRICIAN: The Mobile County Health Department (Alabama) is seeking applicants for the position of Public Health Pediatrician. Mobile County is a rapidly growing county located on the Gulf of Mexico with a population of over 300,000 persons. The Health Department is located in the City of Mobile (Population 200,000) and provides a full range of services. Applicant must be an M.D., qualified to be licensed in the State of Alabama and be Board eligible or Board Certified in Pediatrics. Arrangements may be made to pursue M.P.H. Degree at the expense of Agency. Starting salary \$32,352 eligible in six (6) months for a merit increase, and annual increases thereafter. Maximum \$43,344. Excellent fringe benefits. Submit Curriculum Vitae to: Mr. B. V. Miller, Personnel Director, Mobile County Health Department, P. O. Box 2867, Mobile, Alabama 36601. An Equal Opportunity/Affirmative Action Employer.

MEDICAL CAREER SERVICES, INC.—Family Practitioner needed immediately in Marion, Alabama. Lucrative practice opportunity and rewarding personal situation available. Beautiful, progressive community approximately one hour from Birmingham and Montgomery. Please call collect J. Woodby at (213) 996-6233.

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- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonia. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonia:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

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of the Medical Association of the State of Alabama

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SPECIAL PEDIATRIC ISSUE

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Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malforma-

tions as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control

secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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ABOUT THE COVER

The objective of pediatrics, to which this special issue of the Journal is devoted, is the healthy child, symbolized by this little girl running across a field in summer.

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FROM THE EXECUTIVE DIRECTOR

Looking To April

One of the great attractions of life here in the heart of the Sun Belt is that February carries with it the promise of spring. We can almost paraphrase the British poet and ask: If February comes, can April be far behind?

April means annual session and the annual session this year means Birmingham, where the stage is being set for a meeting to remember. Here in the Montgomery central office we have been planning for it since shortly after last year's meeting in Huntsville.

And, just as surely, we will begin making plans for Montgomery 1980 after we fold the tents on Birmingham.

In my job, I may see the Association from a slightly different perspective from that of most physicians, or even our elected officers. It is not necessarily a clearer perspective, but it is different—a kind of fish eye view of the Alabama physician and his organization. One observation, for what it's worth, follows.

MASA was wisely designed as a continuum, flowing easily from one group of leaders to another. For example, when a new President takes office in April, there is no interruption between one term and the next.

This is provided for in the structure whereby the President-elect serves a year before his term as President, then serves another year after it. There is no break in the chain, no "interregnum", to characterize the awkward, wasteful period between Administrations in Washington.

The staff is an important asset, I think, to this easy transition from one President to another and from one Board of Censors to one with new members.

In this connection, it is remarkable to me that a small town general practitioner, say, is just as comfortable in the President's chair or on the Board of Censors as a metropolitan surgeon, or the other way around.

I suppose it's because physicians have had to be adaptable to survive in a rigorous profession. Whatever quality it is, it impresses outsiders and laymen in general. It could be, as someone said in remarking on the phenomenon, that most doctors are simply natural leaders.

To see this selection process at work is only one more reason to plan to go to Birmingham in April.



S. Lon Conner

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PRESIDENT'S MESSAGE

Put April 19-21, 1979, On Your Calendar

Hiliary H. Henderson, Jr., M.D.
President



The 118th annual session of the Medical Association of the State of Alabama at Birmingham's Hyatt April 19-21 figures to be one of the best ever.

Your officers and the Montgomery staff have been putting it together since shortly after last year's meeting in Huntsville. It takes the better part of a year to work out all the details of a meeting designed to appeal to the hundreds of Alabama physicians who will attend.

We will be honored this year to have AMA President Tom Nesbitt, M.D., of Nashville, with us. Since there is no way the AMA President can attend all the state medical association meetings, or even most of them his presence is an expression of the national organization's interest in Alabama.

The Thursday night reception at The Club, the legendary and fashionable club overlooking Jones Valley, should be a memorable occasion, and certainly if you have never visited The Club.

Friday's scientific sessions will be somewhat different this year, and should be doubly interesting. Instead of breaking up the sessions into specialty problems, this year we will focus on the major medical problems and priorities of Alabama, as identified by the Alabama Department of Public Health. From an overview in the general session, these problems will then be divided into four major components, with various specialties presenting their views on each of them: Maternal and Child Care; Accidents; Pulmonary Diseases; Cancer.

I think you will find the seminars stimulating and rewarding. They also provide you 6 hours of Category I CME credit. (Remember, CME becomes mandatory in July of this year.)

Friday night's award dinner, always a highlight of the annual sessions, will offer two big extras this year: a repeat of last year's highly regarded "This is Your Life" slide presentation honoring our 50-year doctors; and outstanding entertainment by the internationally renowned Auburn University choral group.

We engaged the 42-member Auburn group months ago for this occasion. This group comes highly recommended, having won acclaim even in the Soviet Union for their beautiful renditions of traditional and modern selections.

Saturday morning, of course, is the business session where all the matters placed before the College of Counsellors and the House of Delegates will be transacted.

I hope to see you in Birmingham April 19-21.

Hiliary H. Henderson Jr

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Having weathered that storm, Mutual Assurance is now a permanent institution. It will grow with us, linked to our fortunes and working in complete harmony with the Medical Association that created it out of necessity and continues to support it with pride in its demonstrable solvency, nationally recognized good management, and unquestioned efficiency.

Mutual Assurance was there when we needed it, when the alternative to it was going bare. It is still there. It will be there when we need it in the years ahead: not only to provide the coverage we must have but in using its good offices to spread the word on risk management, working for tort reform, and in the many other ways it can contribute to professionalism. Summarizing all the work that went into the formation of the company and looking at what it will mean in the future, Dr. Bill Wright, who worked long and hard founding Mutual Assurance, commented in the interview with him in the January Journal: "What is important? This is important: the survival of independent medicine."

We agree. We hope you will too. Mutual Assurance, forged in crisis, has become a great asset of Alabama medicine. It belongs to all of you. You run it through the same democratic processes that govern our Association. The profits that will ultimately be gained from our loss experience, if it continues as good as it has been, will be returned to you—not to some distant corporate stockholders. To repeat: it is your company. We urge you to take an active interest in it and join with us in the belief that we now have our own Gibraltar.

—Ed.

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CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdose include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdose.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to:

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

B-3921 (YS87A)

**Whether overweight is a
complicating factor...
or just uncomplicated overweight.**

Tenuate[®] Dospan[®] ^{IV} **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

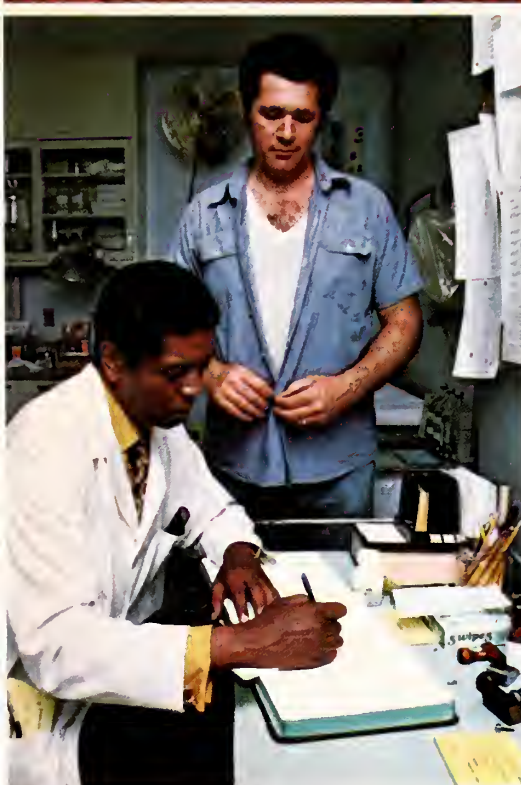
The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.¹ And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."² Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.
And it's responsible medicine.**

Merrell



For prescribing information see opposite page.



The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions.

However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).



Motrin[®] 400 mg TABLETS

ibuprofen, Upjohn

The confidence that comes from experience—
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

The confidence that comes from experience—
one more reason to prescribe

Motrin[®] 400 mg TABLETS

ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. Aspirin used concomitantly may decrease Motrin blood levels. Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

How Supplied

Motrin Tablets, 300 mg (white)

Bottles of 60

NDC 0009-0733-01

Bottles of 500

NDC 0009-0733-02

Motrin Tablets, 400 mg (orange)

Bottles of 60

NDC 0009-0750-01

Bottles of 500

NDC 0009-0750-02

Unit-dose package of 100

NDC 0009-0750-06

Unit of Use bottles of 120

NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3

Upjohn

The Upjohn Company
Kalamazoo, Michigan 49001



MSD
MERCK
SHARP
DOHME

ALDOMET[®]
(METHYLDOPA/MSD)

TABLETS: 500 mg, 250 mg, and 125 mg

Speak Up For Children

By William D. Walker, M.D.*

*Chairman, Alabama Chapter, American Academy of Pediatrics

The American Academy of Pediatrics is an organization of physicians certified in the care of infants, children and adolescents. It numbers almost 20,000 members. The majority of the members come from the United States, but there are members throughout North and South America.

In an effort to foster the welfare of those for whom they care, the physicians who are members of the American Academy of Pediatrics are being asked to participate in the Academy's program of main thrust for 1979. This has been designated: The American Academy Of Pediatrics Speaks Up For The Children.

This program will also be coordinated with the 1980 celebration of the 50th Anniversary of the founding of the American Academy of Pediatrics. Speak Up For Children! will continue throughout the two-year period and into the future.

The program seeks to increase awareness of the full range of issues affecting children. Speak Up For Children! will focus most heavily on four areas of action:

- Accident Prevention—because accidents are the greatest cause of suffering and death among American children.
- Nutrition—because good nutrition started at conception and continuing through adulthood is basic to a healthy, productive life.
- Immunization—because children must be protected against supposedly "conquered" diseases still capable of producing epidemics.
- Health Education—because effective health education for children, adolescents and their families can contribute to happier, healthier and more productive lives.

This program, while being coordinated at the national level, will be implemented by each state organization. The Alabama Chapter of The American Academy of Pediatrics is at work at this time in these areas making every effort to improve the length and quality of life for the children of Alabama.

The American Academy of Pediatrics was founded in 1930 and has as its goal "The attainment by all children of the Americas of their full potential for physical, emotional, and social health." The Academy makes recommendations regarding the delivery of quality child health care, conducts educational programs for child health professionals, encourages support of basic and applied research, promotes programs of public information and child advocacy.

As AAP President Edward B. Shaw remarked more than 25 years ago: "It is significant that the purpose of the Academy, unlike a labor union, has not been to seek benefit for its members but rather for children."

William A. Walker, M.D.
Chapter Chairman



Amniocentesis and Prenatal Detection Of Genetic Disease

Sara Crews Finley, M.D.*

Despite the many advances in the *treatment* of genetic disease, the goal remains *prevention*. Genetic diseases take a heavy toll in childhood in both morbidity and mortality. Approximately 1/3 of infant deaths are due to genetic disease. The pediatrician can play an important role in prevention of genetic disease through counseling to a couple who already has a child or other family member affected with a heritable disorder.

Transabdominal amniocentesis for prenatal detection of genetic disease at approximately 16 weeks gestation is now accepted as safe and accurate, although potential complications do exist.^{1,2} The currently accepted indications for amniocentesis for the prenatal detection of genetic disease are:

- Maternal age of 35 or above.
- A previous child with a chromosomal aberration.
- Parent a known carrier of a translocation chromosome.
- A previous child with a detectable biochemical genetic disorder.
- Mother a carrier of a detrimental X-linked recessive gene.
- A family history of an open neural tube defect.

The reasons remain obscure but there is a maternal age effect on the incidence of Down syndrome and other autosomal trisomies. While the risk of a 20 to 25 year old woman having a child with Down syndrome is approximately 1 in 1500, the risk increases to approximately 1 in 300 by age 35, and to approximately 1 in 16 by age 48. This age-related increase in risk is considered to constitute an indication for amniocentesis if the maternal age is 35 or above. It should be stressed, however, that in

the vast majority of cases, the prenatal genetic studies will bring reassurance rather than identification of a chromosomally abnormal fetus.

The parents of a child with trisomy 21 or other trisomy is considered at some increase in risk for having another. Although the risk for recurrence is probably of the magnitude of 1%, the amniocentesis can bring reassurance during a subsequent pregnancy to the parents who already have a child with a trisomy.

The translocation carrier parent may have been identified because of a previously affected family member or with cytogenetic evaluation seeking an etiology for spontaneous abortions. The balanced carrier parent who is phenotypically normal is at high risk for having a child with an unbalanced chromosomal pattern and concomitant birth defects.

Most of the X-linked recessive disorders cannot be identified *in utero* but since they primarily affect the male fetus, prenatal sex determination can be valuable to the female carrier of a gene such as hemophilia or Duchenne's muscular dystrophy. If a female fetus is identified, the parents can be reassured. If a male fetus is identified, the couple may elect to terminate the pregnancy because of the 50% risk of the male's being affected.

While most multifactorial congenital malformations, such as cleft lip, cleft palate, and club foot cannot be detected antenatally, it is possible to detect open neural tube defects (open spine and anencephaly) at least 16 weeks gestation. The amniotic fluid alpha-fetoprotein (AFP) level is increased in an open neural tube defect. This study plus ultrasound is indicated for the pregnant woman who has had a previous child with a neural tube defect. There is evidence that

maternal serum AFP may be very useful in widespread screening of pregnant women for detection of neural tube defects.³ Presently, however, in this country, no mass routine serum AFP screening is in progress. The risk for recurrence of a neural tube defect is approximately 5% so that amniotic fluid AFP (plus ultrasound) should be offered the pregnant woman who has had a previously affected infant. There is evidence that a family history of open spine in a niece or nephew or sibling also increases the risk for having a child with a similar problem.

The number of single gene disorders detectable *in utero* is growing rapidly. More than 80 such diseases have been diagnosed prenatally and techniques are presently available for detecting a number of others. The indication for prenatal genetic diagnosis of these biochemical disorders is based on knowledge that the pregnancy is at high risk for the specific disorder in question. Most of these disease are autosomal recessive, which means that if an affected child is born, both parents are heterozygotes and thus any subsequent offspring of that couple is at 25% risk. It is necessary that the affected offspring have a specific biochemical diagnosis so that the appropriate biochemical assay can be performed on amniotic fluid cells with a subsequent pregnancy.

A recent review lists the heritable disorders which have been detected *in utero* and others for which the diagnosis is possible.⁴ Examples of these metabolic disorders which have been detected *in utero* include:

Fabry's Disease
Gaucher's Disease
GM1 Gangliosidosis (types 1 & 2)
Tay-Sachs Disease
Sandhoff's Disease
Krabbe's Disease

*Professor of Pediatrics, Co-Director of Laboratory of Medical Genetics, University of Alabama in Birmingham.

Metachromatic Leukodystrophy
Hurler's Syndrome
Hurler's Syndrome
Maple-Syrup Urine Disease
Methylmalonic Aciduria
Glycogen Storage Disease (II & IV)
Congenital Nephrosis
Lesch-Nyhan Syndrome

Ultrasound has been shown to be very useful in prenatal diagnosis and its acuity will no doubt increase. Its use in open neural tube defects, such as anencephaly, has been mentioned. It also can be helpful in detection of certain soft tissue defects such as polycystic kidneys. Fetal x-ray can be useful in selected cases where the fetus is at high risk for a skeletal disorder such as achondrogenesis. Fetoscopy and fetal blood sampling will add new dimensions to prenatal detection of genetic disorders.

While pediatrics and other branches of medicine have made great strides in improving the

length and quality of life for the child with a severely handicapping genetic disorder, most cannot be aided to a desirable degree. Many times the pediatrician feels very limited in his or her capacity to help the child but help may be afforded the family through appropriate genetic counseling.

Most News Is Good

Amniocentesis and prenatal detection of genetic disease will play an increasing role in the prevention of handicapping pediatric disorders. Perhaps of equal importance, it permits high risk couples to have a normal healthy child when, without these studies, they would fear to have a pregnancy at all. The majority of prenatal genetic studies are normal and thus bring the reassurance which is needed so much by the couple who already has had a severely handicapped child.

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1. Milunsky, A. "Risk of Amniocentesis for Prenatal Diagnosis." *N. Engl. J. Med.* 293:932-933, 1975.
2. NICHD National Registry for Amniocentesis Study Group. Mid-trimester Amniocentesis for Prenatal Diagnosis; Safety and Accuracy. *J.A.M.A.* 236:1471-1476, 1976.
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~~~~~



After specializing in the treatment of alcoholism and drug addiction for 17 years, we found . . .

**if there
are problems
and there
is drinking...
drinking
may be the
only problem!**

Willingway Hospital

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Accredited by the Joint Commission on Accreditation of Hospitals

The Primary Care Physician And Mental Retardation

Gary J. Myers, M.D.
Associate Professor of Pediatrics, CDLD
University of Alabama School of Medicine

*"We learn as much from illness as from health,
from handicap as from advantage, and indeed
perhaps more."*

Pearl Buck¹

Mental retardation is the most common neurological problem seen by physicians. In the United States alone there are 5 to 6 million retarded individuals. Each year 120,000 children are born who will be mentally retarded. The impact of mental retardation on the public is immense. In 1970 alone, public institutions spent \$170,000,000 and employed 117,000 people.² Its impact on families is equally great, as seen by Pearl Buck's comments when writing about her mentally retarded daughter. Despite this, it was only accepted as a neurological entity after 1950.³

Recent trends of deinstitutionalization and mainstreaming in this country have increased public contact with the mentally retarded. The term mental retardation itself has different meanings and evokes differing emotions from various individuals. Helping people to understand the mentally retarded, along with helping those who are retarded, has become a major role of physicians.

The primary physician's role in dealing with the mentally retarded is unique. The physician is the first health contact for most patients with mental retardation. In addition, the primary physician is generally familiar with the family, has contact with them over a long period of time, and has already gained their trust and respect. The physician's experience and expertise in recognizing high risk groups, assessing development, evaluating the results of tests and determining the biological basis for the problem are additional assets. The physician can also readily arrange tests, interpret the results to the family, and is able to help in planning and arranging treatment for the child (Table I).

TABLE I

UNIQUE ROLE OF PRIMARY PHYSICIAN

Knows the Family
Has Early and Longitudinal Contact with Child and Family
Has the Expertise and Capability to:
Recognize High Risk Groups
Assess and Follow Development
Arrange Diagnostic Procedures
Evaluate the Test Results
Determine the Biologic Basis of the Problem
Interpret Test Results to the Family
Help Plan and Arrange for Care and Treatment
Follow and Evaluate the Child's Progress and the Treatment Program
The Family Respects, Trusts and Looks to the Physician for Information and Guidance

Defining Mental Retardation

Mental retardation is not a specific diagnosis, but rather a syndrome. The World Health Organization defines it as an "incomplete or insufficient general development of mental capacities." In 1959, the American Association for Mental Deficiency (AAMD) defined mental retardation as an intelligence quotient (IQ) of one standard deviation below the mean, associated with changes in adaptive behavior and occurring during the development period. In 1973, the AAMD changed the definition regarding IQ to two standard deviations below the mean.⁴ Approximately 14% of the general population have an IQ between one and two standard deviations (one standard deviation is 15 points on the WISC-R Intelligence Scale for children) below the mean. This redefinition reduced the population labeled as mentally retarded by nearly 80%.

The IQ is one criterion helpful in establishing the diagnosis of mental retardation. IQ tests are generally divided into two areas (Table II).

— CONTINUED ON PAGE 23 —

TABLE II

WISC SUBTESTS

VERBAL	PERFORMANCE
Information	Picture Completion
Comprehension	Picture Arrangement
Arithmetic	Block Design
Similarities	Object Assembly
Vocabulary	Coding
Digit Span	



Dyazide[®]

Each capsule contains 50 mg. of Dyrenium[®] (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense in Hypertension*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* **Warning**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spiro-lactone is used concomitantly, determine serum K⁺ frequently; both can cause K⁺ retention and elevated serum K⁺. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
a SmithKline company

Carolina, P.R. 00630

**When painful spasm
is the presenting
symptom...**



... in functional G.I. disorders*

Bentyl[®]

(dicyclomine hydrochloride USP)

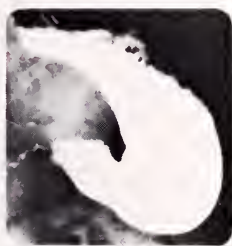
10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity
with minimal anticholinergic side effects[†]

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection
AVAILABLE ONLY ON PRESCRIPTION.

Brief Summary INDICATIONS

For use as adjunctive therapy in the treatment of peptic ulcer. IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHLINERGIC ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably effective."

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders), and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis), paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with autonomic neuropathy, hepatic or renal disease, ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon, hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension, hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg capsule and syrup: Adults 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children 1 capsule or teaspoonful syrup three or four times daily. Infants ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg: Adults 1 tablet three or four times daily. Bentyl Injection: Adults 2 ml (20 mg) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

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Some subtests evaluate mainly verbal skills, while others require more motor activity, but there is significant overlap. In evaluating the results of IQ tests, it is important to recognize the extraneous factors which can influence the final score (Table III). Identical twin studies indicate that approximately 65 to 85% of the intelligence has a genetic basis.

TABLE III
FACTORS INFLUENCING I.Q. TESTS

Motivation
Anxiety
Relation to Examiner
Alienation
Withdrawal
Thought Disorders
Impulsivity
Limited Attention
Lapses of Attention (petit mal)
Sensory deficits (hearing, vision)

Past studies of children diagnosed as being mentally retarded have shown an overlap of IQ scores with those children considered normal. This has led to increasing attention upon adaptive behavior in defining mental retardation. Adaptive behavior refers to those abilities which allow a person to function independently, both in the home environment and in society in general. The ability to dress, eat, communicate, interact socially, and manage one's own toileting are examples of such behaviors. These skills and the expectations that others have for an individual increase through life. With maturity, individuals acquire increasing mastery over their own bodies and the environment. They also learn to reason, judge, and understand abstract concepts. In adult life, vocational skills assume increasing importance.

IQ and adaptive behavior correlate at low IQ levels and during the school years, but the correlation is poorer when IQ levels are borderline. At higher IQ levels, such factors as physical defects, personality problems, mental illness, and general social skills assume increasing significance. This is best illustrated by children who appear retarded in school and yet function adequately in their own cultural environment.

Mental impairments may occur at any age, but the diagnosis of mental retardation is reserved for those individuals manifesting signs prior to 18 years of age.

The Epidemiology of Mental Retardation

The overall incidence of mental retardation is about 3%. Among every 1000 newborns, approximately 1 will have an IQ less than 20, four will have an IQ less than 50, and 25 will have an IQ less than 70.⁵ It is difficult to translate this incidence (number of cases occurring during a specified time period) to prevalence (number of cases present in a population at a given time). This may relate to the difficulty in recognizing mental retardation at an early age, an increased mortality for children with severe mental retardation, the improvement of social skills as children mature, or the absorption of many mental retardates into the adult work force. Since up to two-thirds of the mentally retarded may be capable of functioning in some type of work capacity, they may not be readily visible within the community.

— CONTINUED ON PAGE 29 —

TABLE IV
ALABAMA (1974)

	<u>TOTAL POPULATION</u>	<u>MENTAL RETARDATION</u>
REGION I	806,800	24,131
Madison	199,200	5,958
REGION II	227,300	6,799
Tuscaloosa	134,500	4,022
REGION III	680,700	20,360
Mobile	345,400	10,331
REGION IV	702,300	21,007
Montgomery	180,400	5,396
REGION V	1,330,200	112,084
Jefferson	671,700	20,091

The Health Regions are defined in reference 5. The county with the largest population within each region is provided for comparisons.

TABLE V

ALABAMA (1974) - TOTAL POPULATION 3,747,300

	<u>TOTAL POPULATION</u>	<u>MENTAL RETARDATION</u>
0-2 Years	174,886	9,986
3-5 Years	203,891	11,642
6-18 Years	912,992	42,819
19-21 Years	208,462	4,044

"THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

—Dr. William Felts, Past President,
American Society of Internal Medicine



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*PATIENT CARE Magazine—Outlook 1977 "Face-Off: Cost Containment vs. Chaos," January 1, 1977.

Lyle CB, et al "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

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According to a recent study,¹ Salutensin® (hydroflumethiazide 50 mg./reserpine 0.125 mg.) was the most economical "step two" therapy... about 1/3 the cost of a day's supply of thiazide + methyldopa or thiazide + propranolol.²

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Salutensin contains the recommended effective doses of both its components, requiring minimal titration.

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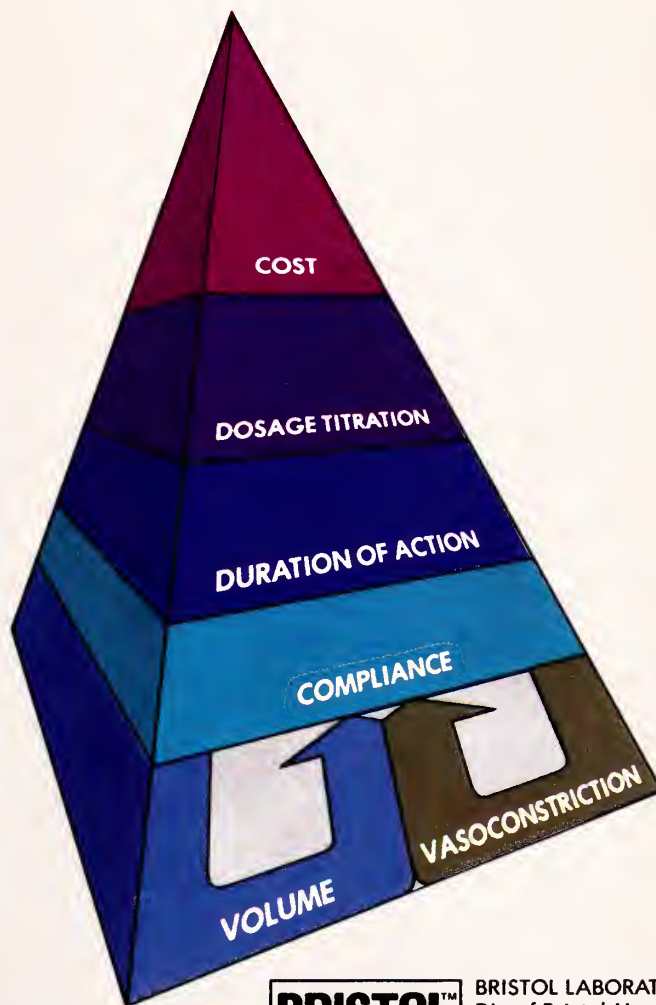
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The total daily dose can be given once a day. Compared with multiple-daily-dosage medications, the chance of a missed dose is greatly reduced.

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completing the
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References: 1. Finnerty, F.A. et al.: An Evaluation of Step 2 Regimens in Hypertension, data on file, Bristol Laboratories, 1977. 2. Red Book 1977.

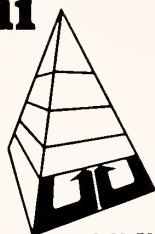
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long run in "step two"
hypertension



Saluron® (hydroflumethiazide)

For complete information consult Official Package Circular.

CONTRAINDICATIONS: Patients with anuria, oliguria, or hypersensitivity to this or other sulfanamide derived drugs.

WARNINGS: Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in pregnancy: Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing mothers: Thiazides cross the placental barrier and appear in cord blood and breast milk.

PRECAUTIONS: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except, under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS:

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

USUAL DOSE: The average adult diuretic dose is 25 to 200 mg. per day.

The average adult antihypertensive dose is 50 to 100 mg. per day. Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

HOW SUPPLIED: Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

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(12) 10/27/78

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in pregnancy: Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fetal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precoma hepatic cirrhosis. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being pre-diabetic should be kept under close observation if treated with this agent.

ADVERSE REACTIONS: Hydroflumethiazide: Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE: 1 tablet b.i.d.

HOW SUPPLIED: Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

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Among the 3.7 million citizens of Alabama, some 180,000 are thought to have a developmental disability (DD).⁶ Some 170,000 of those with DD will be mentally retarded. Table IV outlines the distribution by regions and major cities of mentally retarded individuals within our State. Table V is the same data reorganized to show the distribution of the mentally retarded within the pediatric population.

Pathologic and Clinical Basis

No uniform pathological basis for mental retardation has been identified. Indeed, postmortem studies by the usual techniques reveal no pathological abnormality in 40% of the individuals with mental retardation.⁷ A pathological basis is more frequently found in the more severe degrees of retardation. The clinical etiology of mental retardation is equally difficult to determine. Data from referrals to the maternal child health clinics during 1968 indicate that 30% of all referrals had no evidence of mental retardation. Among the remaining 70%, 32% had no clearly defined etiology.²

Classifying Severity

The severity of mental retardation is commonly based upon the IQ, even though adaptive behavior and age are important in the diagnosis (Table VI). Children who are moderately retarded have some self-help skills, but cannot live independently and seldom acquire academic skills. Children with an IQ level between 69 and 85 frequently have problems in school, but should not be considered retarded. Such children often present to psychiatrists at a later age because of social inadequacy or antisocial behavior. In teenage females, this is often promiscuity, while in males, it is acting out or juvenile delinquency.

TABLE VI

DEGREES OF MENTAL RETARDATION

	I.Q.	% MR POPULATION
Mild	55-69 (-2 SD)*	89
Moderate	40-54 (-3 SD)	6
Severe	25-39 (-4 SD)	3.5
Profound	<24 (-5 SD)	1.5

* 1 SD is 15 I.Q. points on the WISC

Preventing Mental Retardation

Preventing the development of mental retardation would be ideal, and the medical profession should be proud of its accomplishments in this area during the last half century. The widespread use of

immunizations and the early treatment of infectious diseases (meningitis, etc.) have reduced the incidence of spread to the nervous system and secondarily of mental retardation. Recognition and early intervention in acute metabolic derangements, such as hyperbilirubinemia, hypoglycemia, and hypoxia, or chronic changes as seen in inborn errors of metabolism have also reduced the incidence of brain damage. The treatment of children with phenylketonuria (PKU) by early dietary management is an example. This usually prevents the development of mental retardation, and the approach is both widely accepted and economically sound. The recent focus of medical attention upon accident prevention holds promise for further reduction."

Improved obstetrical and perinatal care is another major stride. In the past, two-thirds of all surviving prematures could be expected to have serious physical or mental handicaps. Although prematures account for only about 5% of births, the morbidity and mortality among them are high.⁸ A 1972 study from Denver illustrates this point. Among 133 infants weighing less than 1500 grams at birth, only 30% were physically and mentally normal at age 5.⁹ Forty-three percent of those infants had an IQ below 90, and 32% had a spastic diplegia. One of the earliest reports of an improved outlook for prematures came from Birmingham in 1973. Fifteen infants with birth weights from 900 to 1100 grams were reported, of whom 14 were examined between 11 and 33 months of age and compared with 14 control term infants.¹⁰ The mean IQ for the low birth weight infants was 100, while for the term infants it was 101. Eleven of the low birth weight infants were considered entirely normal. At the present time, full two-thirds of all infants born between 28 and 29 weeks of gestation, or later, can be expected to survive, and the out look for these infants is much improved.

The prenatal diagnosis of conditions known to have a high association with mental retardation has opened the door to selective abortion as another means of prevention. Many genetic and biochemical disorders can now be diagnosed by amniocentesis, and ultrasonography is helpful in some structural disorders (hydrocephalus, anencephaly, etc.). These techniques are currently utilized extensively for the diagnosis of trisomy 21 and neural tube defects. Although successful, this approach raises ethical questions which must be personally resolved by the individuals involved.

The reversal of mental retardation once it is present might constitute another approach, but it is not yet clear if this can be accomplished. Many children diagnosed as being mentally retarded,

however, learn adaptive behavior and vocational skills which allow them to function adequately in society at a later age. Early intervention can help children to learn such skills and may be an example of this approach. Some of the experimental evidence for thinking this is presented later.

Diagnosing Mental Retardation

The diagnosis of mental retardation is such a serious label that it should be made only after careful investigation. Rarely, metabolic disorders such as amino or organic acidurias require a more rapid diagnosis. The most frequent causes of mental retardation are static lesions. The average age when children with mental retardation are diagnosed is about 25 months.¹¹ Parents suspect a problem about 8 months of age in children with severe retardation, while children with mild retardation may be considered normal until about 25 months of age. The lapse between when the parents suspect something is wrong and a firm diagnosis is usually about 12 months, but with increasing severity of retardation the lapse is shorter. Rural children are both suspected of mental retardation and the diagnosis confirmed at later ages than urban children.

Early Diagnosis

Is earlier diagnosis possible? In 1972, Holden addressed this issue by looking at data from the perinatal collaborative study.¹² One hundred and fifteen children, who at age 8 months were one month behind in development on the Bayley scales, were selected and matched with a normal control group. By 4 years of age there were 18 children in the delayed group and 5 normal controls with an IQ less than 69. Those children with an early delay had a risk three and one-half times as great as the control group. Equally important, the majority of children who appeared abnormal at age 8 months were normal at age four years, and several abnormal children were found in the control group. Other authors have approached this problem by categorizing infants into risk groups. One study reviewed 118 newborns with birth weights below 2000 grams.¹³ Six of these infants by 5 years of age had major neurological abnormalities. Of the six, five either had an abnormal neurological examination or a head circumference below the 10th percentile as newborns. When the intelligence of those infants who were small for gestational age was examined, it correlated well with head circumference. Those with a small head circumference had a mean IQ of 83, while those with a normal head size had a mean IQ of 95. It is possible to suspect mental retardation early on the basis of the history and physical findings, but a definitive diagnosis remains difficult.

Many medical diagnoses are associated with mental retardation (PKU, Down's), but there are no specific tests that define it. To make the diagnosis, the physician must distinguish between the various disorders which might be confusing. Abnormalities in sensory perception (auditory or visual), cerebral palsy, seizure disorders, and childhood aphasia are examples of such disorders. Children who are energy-depleted (chronically ill or malnourished) and those from certain cultural backgrounds may also appear retarded.

Initially the physician should take a careful history. The family's initial complaint may not reflect their real concern, but is frequently a specific item such as a behavioral problem or failure to reach some developmental milestone. Behavior problems are common in children with mental retardation. They consist of such things as restlessness, repetitive aimless motor activity, explosive reactions, or self-stimulatory behavior.

Obsessive, stereotyped or repetitive actions are often seen. The history should focus on the pregnancy and perinatal events (hypoxia, meningitis, etc.) which are known to be associated with mental retardation. Perinatal events, development and family history are equally important. The physician should then examine the child carefully. Special attention should be directed to the head size, skin abnormalities (suggestive of neurocutaneous disorders), and the child's behavior.

Estimations of intelligence should be done professionally, since physicians often overestimate the intelligence of children without a physical handicap and underestimate that of children who are physically handicapped. This is most apparent in children who have spina bifida, where fully two-thirds have normal intelligence despite hydrocephalus and other severe handicaps. Occasionally, individuals with mental retardation have areas of outstanding performance. Some of these "idiot-savants" are able to perform unusual feats of calculation, memory, mechanical skills, or have exceptional musical or artistic talent.¹⁴

Which Tests To Order

Many laboratory tests are available to help evaluate children with mental retardation, but the physician needs to be discriminating in which tests to order. In a recent study of 1,560 patients with a mean IQ of less than 50 and a mean age of 11½, the authors found that the children could be divided into two large groups.¹⁵ One group consisted of children who looked normal, and the other of those who had a physical deformity or dysgenic features. Chromosomal studies were only of value in the latter group.

In the children who appeared normal, metabolic studies, and in some instances a brain scan using

computerized axial tomography were helpful. Other tests, such as skull films, serum lead, thyroid hormones, and enzyme assays are also at times useful. Invasive tests looking at central nervous system morphology are rarely indicated. An individual IQ test, behavioral evaluations, hearing and vision examinations, and at times a neurological consultation should be considered. Longitudinal follow-up is often the most helpful way to confirm the diagnosis, but occasionally parental pressure makes this difficult. Careful record keeping is essential so that developmental progress can be documented. Although families need and deserve a specific diagnosis, labeling a normal child as retarded can be very destructive.

Treating Mental Retardation

After a diagnosis is made, the special skills of the physician become even more important. The diagnosis must be explained to the family and plans formulated on how to best handle the child. How the child's disability is presented may influence the family's continued trust and confidence in the physician. Adequate time should be set aside to present the findings and the conclusion, and also to listen to the family and answer their questions. This is a critical moment in their lives, and its handling may have long lasting consequences.

The child's abilities should be stressed and some honest, positive statements about the child should be made. Frequently, physicians focus on the disability, but families need a ray of hope to help them meet this crisis. The findings, reasoning, and conclusions should be presented calmly and without undue optimism or pessimism. The term brain damage or mental retardation should be used cautiously, since they have tremendous emotional impact. If there is any doubt about the family's understanding or acceptance, a second visit for further discussion should be considered.

Special attention should be given to practical ways in which the family can help the child. What things can they do to help their child improve. Should they provide more discipline and structure to daily activities, be more understanding of accidents, or exactly what. The physician's advice on such practical issues as toileting, dressing, eating, play situations, and other everyday events can be very helpful to the family. The physician's interest alone has a therapeutic benefit. It helps the family to feel less isolated, assures them of assistance in meeting other health care needs, and provides access to new developments in therapy.

The impact that the diagnosis of mental retardation has on the parents needs to be recognized. Many feel ashamed and that they personally are of lesser quality since they were the parents. These

feelings may lead to ambivalence, depression, or outright hostility. For the child's benefit, the physician should make every effort to maintain a good relationship with the family. Parents want and need someone who is honest and realistic, who can advise and offer guidance, who will support them by caring, who will listen to their concerns, and who will confirm the child's value irrespective of the seriousness of the disability.

Intervention

Having made the diagnosis as early as possible, is intervention helpful? The recognition of the problem itself relieves the family's anxieties and uncertainties. It permits everyone to focus on helping the child by programs both at home and later at school which will build upon the child's abilities. It allows expectations for the child to be more realistic and helps everyone to achieve a more positive attitude. There is evidence in animals that early sensory experiences have both anatomical and physiological effects upon the development of the nervous system.

Cats reared from birth in total darkness are later cortically blind,¹⁶ and have atrophy of the lateral geniculate. This can be produced unilaterally by suturing the eyelids on one side closed at birth. Physiological variations of visual functioning can be produced by rearing animals in an environment of all vertical or horizontal lines. They then have difficulty interpreting visual clues with other orientations when they are older.¹⁷ Other studies show that physical contact and sensory stimulation are essential for normal physiological and emotional development.¹⁸

The evidence in humans that early intervention and stimulation can alter the ultimate outcome is less clear. It is known that maternal deprivation and institutionalization can lead to significant developmental lags and growth retardation.¹⁹ Language and socialization appear to be the areas most affected. From the animal data and studies of deprivation, it has been suggested that active intervention may improve development. However, the evidence supporting this line of reasoning is incomplete. Stimulation by handling has been shown to increase visual attentiveness in infants.²⁰ An infant's behavior can also be conditioned. Vocalizations which stimulate the child to turn in one direction and are then reinforced with social interactions, like smiling, touching, or talking, result in increased turning in that direction by the infant. In one study, the infant's orientation towards sound increased 35% each day for two days with such conditioning.²¹ However, two days later this ability had returned to baseline.

Several studies have shown similar results in infant learning over a short period of time. There is limited evidence that these gains are maintained and studies of moderately to severely retarded children treated with patterning and motivational stimulation have indicated few long-term gains.^{2,2} This issue has not been studied well in children with milder defects, and the less seriously impaired brain may well respond to increased stimulation. The benefits to the family, however, of actively intervening to help the infant are enormous.

Conclusions

Pediatricians and other primary care physicians dealing with children are being called upon to pay more attention to children with handicaps of all types. Public Law 94-142 mandates that all handicapped children will have available a free and appropriate public education.^{2,3} This law, which became effective in September 1978, defines the public obligations for the education of children with mental retardation and other developmental disabilities. Although the inclusion of medical expertise was not mandated in the original legislation, the physician is uniquely qualified by virtue of his broad understanding of the health problem, the family, and the community to deal with these children.

Challenging Area

The area of mental retardation is a challenging one in which pediatricians and other primary care physicians have a major role. The brain is such a marvelous organ that, with help, even one less than perfect can accomplish a great deal.

"Where else can one find a computer containing more than 10 billion flip-flop circuits, occupying less than a cubic foot of space, operating on the energy of a peanut for four hours, being totally mobile, and produced with unskilled labor."

Dr. J. Mier^{2,4}

References Available Upon Request

Medicine is the only profession that labors incessantly to destroy the reason for its own existence.

James Bryce: Speech in New York, March 23, 1914.

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Neonatal Thyroid Screening

by Russell D. Cunningham, M.D.*

The development of a screening program for congenital hypothyroidism appears to be an inevitable result of observations that have recurred over a period of many years. In 1915 Tredgold suggested that therapy prior to 3 months of age would be the desirable approach if normal mental development in patients with congenital hypothyroidism were to be achieved.¹

The consequences of severe hypothyroidism on mental development, as well as the relationship of development to early treatment, were subsequently pointed out by Smith, Wilkins and associates in Baltimore.² (Table 1) Of the patients with severe hypothyroidism, (onset of symptoms prior to six months of age), only 15% attained an I.Q. of greater than 90. Indeed, 41% out of this group of patients had an I.Q. of less than 50.

Table 1

The Relationship of I.Q. to the Onset of Symptoms of Hypothyroidism (2)

	Severe (%)	Mild (%)	Acquired (%)
>90	12 (15)	13 (41)	13 (77)
70-89	21	12	3
50-69	14	5	0
<50	32 (41)	2 (6)	1 (6)
TOTAL	79	32	17

In patients with mild hypothyroidism, (onset of symptoms after 6 months of age) and acquired hypothyroidism (onset usually after 2 years of age), the I.Q. and mental development were vastly superior. The severe hypothyroids were divided according to the onset of therapy, i.e., prior to 6 months of age, 7-12 months of age and after 12 months of age (Table 2). There was an apparent suggesting early therapy might well be beneficial. Only 25% of those treated prior to 6 months of age achieved an I.Q. of greater than 90. Similar observations from Holland³ indicated that the diagnosis was delayed beyond 4 months in 71%

and beyond 6 months in 54% of patients. The final mean I.Q. in that group of children was 71 with 72% at values below 90 and 20% below 50. Only 9% of the children completed secondary school, and 68% required special education. More than 50% manifested marked retardation of the motor coordination required for swimming and cycling.

Table II

I.Q. Related to Onset of Therapy in Congenital Hypothyroidism (2)

SEVERE				
Age (mos)	0-6 (%)	7-12 (%)	12 (%)	
>90	10 (45)	2 (29)	0 (0)	
70-89	6	3	9	
50-69	2	0	4	
<50	1 (18)	2 (29)	9 (61)	
TOTAL	22	7	22	

Clinical Signs

Clinical signs of congenital hypothyroidism including feeding difficulties, constipation, hypothermia, facial and parapharyngeal edema, large posterior fontanel, skin mottling, prolonged icterus, and umbilical hernia, are all relatively non-specific, variable in extent and easily missed. The disorder is diagnosed clinically in less than 10% of affected infants before 2 months of age.

Kenny, et. al., revitalized interest in this problem in a similar study of a group of severely affected hypothyroid infants.⁴ In this study (Table 3), 9 children who were diagnosed prior to 3 months of age had a mean I.Q. of 89. Treatment after 3 months of age revealed a significantly declining I.Q. with advancing age of onset of therapy (Table 4). Those treated prior to 3 months of age (70%) achieved an I.Q. greater than 85, while only 13 and 25% achieved this level when treatment was commenced later than 3-4 months or 5-6 months, respectively. None of the children treated after 7 months of age achieved an I.Q. greater than 85.

Several lines of research since this publication have permitted the development of a screening

*Professor of Pediatrics, University of Alabama School of Medicine

program for congenital hypothyroidism. First, was the development of screening programs for other metabolic errors. In addition, the knowledge of maternal fetal physiology in relation to thyroid

Table III

Means, standard deviations, and ranges of I.Q. versus age at initiation of therapy in congenital hypothyroidism (note the large standard deviations and ranges for all age groups)(4)

GROUP	Patients		Stanford-Binet I.Q.			Significant Tests
	Age (mo.)	No.	Mean	S.D.	Range	
A	<3	9	89	14	64-107	
B	3-4	8	70	19	36-96	A vs B p< 0.05
C	5-6	8	71	20	34-97	A vs C p< 0.05
D	≥7	6	54	20	25-80	A vs D p< 0.01 A vs B+C+D p< 0.01

Table IV

Relationship of age at onset of thyroid treatment to subsequent I.Q. of patients with congenital hypothyroidism (4)

Congenital Hypothyroidism	Age (mo.) at start of therapy in 4 groups of patients			
	A >3	B 3-4	C 5-6	D ≥7
I.Q. >85	7	1	2	0
I.Q. <85	2	7	6	6
% >85	78	78	25	0

function has indicated that the ability to screen was certainly possible, based on the fact that maternal thyroid hormone transferred to the fetus accounts for less than 10% of the thyroid hormone found in the normal fetus.

Additionally, control of thyroid hormone secretions by secretion of thyroid-stimulating hormone (TSH) has become well-established in the human fetus during the last trimester of pregnancy. Thus, the increased TSH secretion response to thyroid hormone deficiency is present at birth and newborn infants with hypothyroidism will have low blood levels of thyroid hormones and high blood concentrations of TSH.⁵ The development of radioimmunoassays, with enhanced sensitivity, has permitted the measurement of the hormones in biologic fluids. Precision of these assays has been refined to a point where samples can be analyzed in as little as 20 microliters of blood. These separate lines of research have combined to provide us with several mass screening programs for congenital hypothyroidism in North America (Table 5).

Table V

Number of Infants Screened and Abnormal Infants Detected in Experimental Newborn Screening Programs for Congenital Hypothyroidism (5, 7, 8)

Screening Program	No. of infants Screened	Abnormal Infants Detected	
		Primary Hypothyroid	Secondary Hypothyroid
Quebec	278,000	65	6
Oregon	133,000	29	0
Massachusetts	214,000	45	-
Pittsburgh	35,000	6	-
Toronto	48,000	11	1
Birmingham	2,446	1	0 (5 TBG deficiency)
Alabama	22,500	4	0
TOTALS	832,946	161	7

Program Variations

A number of variations in screening programs have been utilized. These have varied from measurements of T4 alone in cord blood to T4 and TSH in cord blood. Measurements of T4 on filter paper spots and T4 on filter paper spots with confirmatory TSH have been utilized. The experience of these various assays has led to the recommendation of the American Academy of Pediatrics⁶ that heel prick blood be collected on filter paper at the time of discharge from the nursery. A T4 should be performed on this spot with a back-up of a TSH radioimmunoassay in the event of low T4. Every detected hypothyroid infant should have therapy by one month of age as a major objective in screening.

Approximately 830,000 patients had been screened for hypothyroidism in various centers throughout the country by September, 1977.^{5,7,8} Quebec has used screening by application of the thyroxine immunoassay to filter paper spot during the process of PKU screening. Subsequently, the program has adapted a highly sensitive radioimmunoassay system for measurement of filter paper spots of TSH concentrations for specimens with low T4 values. Screening in Pittsburgh was done by measurement of cord serum TSH concentrations using a routine serum TSH radioimmunoassay. Toronto's program now measures cord serum T4 with supplemental cord serum TSH radioimmunoassay and T3 resin uptake in all infants with serum T4 in the lowest 8-12 percentile.

The Oregon-Massachusetts program screened the filter paper spots of T4 measurements and follow-up TSH radioimmunoassays with values in the lower 3% of T4 results. 161 patients with primary hypothyroidism have been diagnosed as a result of these screening programs. In addition, 7 patients with secondary hypothyroidism have been detected. Two programs using TSH immunoassays were not able to detect patients with secondary hypothyroidism. In Birmingham,⁷ the laboratories have used a screening program in a number of private hospitals utilizing cord blood. They screened for

thyroxine and where the values were low, ran the sample for TSH and T3 resin uptake. Of the 2,446 screened in these hospitals, they have detected one case of congenital hypothyroidism. No cases of secondary hypothyroidism as yet have been detected, and five patients with low T4, normal TSH and elevated T3 uptakes were assumed to have thyroxine binding globulin (TBG) deficiency. Four cases of primary hypothyroidism have been detected by the Alabama State Laboratory using filter paper tests.⁸ When the results are combined with the results of screening at the State Laboratory, the incidence in Alabama approximates 1 in 5,000. An overall incidence of primary hypothyroidism of one in 4,589 has been found. The over-all incidence of secondary hypothyroidism was one in 65,670. Six infants with congenital hypothyroidism are known to have been missed by the various screening programs. All were missed because newborn samples were not sent to the screening laboratory and filter paper specimens were mislabelled or misfiled. Only 4.5% of all of these infants were suspected on the basis of clinical evidence of hypothyroidism prior to the time of reporting the confirmed screening results at 4-8 weeks.

Detection Varies

The incidence of TBG deficiency detected in these screening programs has varied from one in five thousand in Toronto, to one in eleven thousand in Quebec. The average incidence approximates one in 9,420, or about half the incidence of congenital hypothyroidism.

Types of primary hypothyroidism identified in newborn screening programs include 95 or 91% with aplastic or hypoplastic glands, including ectopic glands. Nine percent have been found to have some form of goitrous hypothyroidism. The incidence of goitrous hypothyroidism approximates one in 68,000.

Characteristics of the various screening programs have been included (Table 6) along with the estimated cost per infant for screening. (The Quebec study does not include all costs.) The average cost per screening of all of these infants has been estimated to be one dollar per infant screened. The average time in days to treatment is very important in terms of ultimate success with these programs. Quebec's program has had an average time of 25 days, but at a recent meeting, Dr. Dussault indicated that this time had been further shortened. The implementation of screening programs, both in Birmingham and in our State laboratory, has resulted, to the best of my knowledge, in the location of at least 5 infants with congenital hypothyroidism in this area. However, it has, in addition, resulted in a number of questions being posed about the results of screening tests.

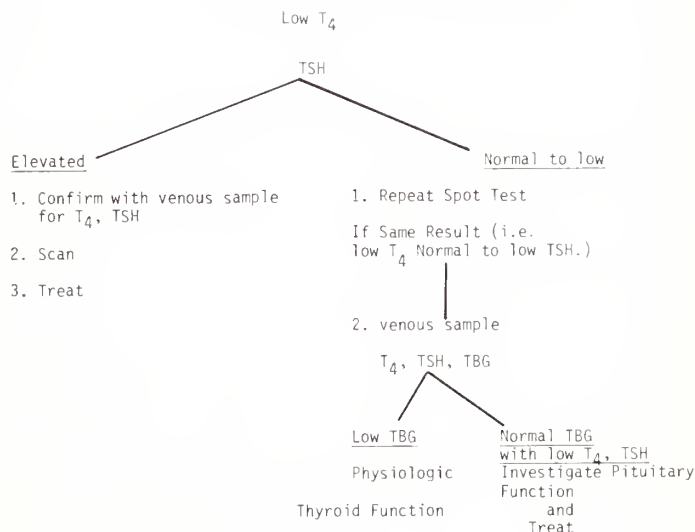
Table VI

Characteristics of Newborn Screening Programs for Congenital Hypothyroidism (5)

Screening Program	Average Time (Days) To Treatment	Estimated cost per infant for screening
QUEBEC	25	\$0.60
OREGON	41	\$2.25
MASSACHUSETTS	22	\$1.00
PITTSBURGH	18	\$1.61
TORONTO	30	\$1.50

Figure 1 is a flow sheet that indicates an approach to the results of screening tests performed on the filter paper spot samples in particular. In as much as our laboratory does run the TSH along with the T4, we can divide our infants with the low T4's into two groups: those with elevated TSH and those with normal to low TSH. The elevated TSH is virtually indicative of congenital hypothyroidism. This diagnosis, in view of its indications for a life-time of therapy, should be confirmed with venous sample of both a T4 and TSH. While waiting and virtually at the same time, a scan can be performed to indicate whether this is one of the hypoplastic, aplastic or ectopic thyroids which make up the 91% of this group of patients. While scans have no effect on the therapy to be administered to a child, the results do have some implication in terms of genetic counseling. The 9% of this group of patients with hormonal dysgenesis or enzymatic defects in the formation of thyroxine, are the patients who have conditions that

Figure I
APPROACH TO RESULTS OF SCREENING TESTS



are inherited as an autosomal recessive characteristic. Thus, these parents may have a one in four chance of having such a child again. Treatment should be instituted while awaiting these results to achieve our objectives of therapy as early as possible.

If the TSH is normal to low among with low T4, a repeat spot test is indicated. If the same result is obtained, i.e., a low T4 with a normal to low TSH, a venous sample should be collected for a T4, TSH and thyroxine binding globulin level (TBG). The low TBG which will occur at least as half as frequently as congenital hypothyroidism is a totally physiologic condition in which the level of free thyroxine available to the tissue is normal.

Approximately 99.9% of thyroxine is bound to serum proteins. If the protein concentration is diminished, therefore, a total of T4 measurement will be diminished. These conditions have absolutely no consequences in terms of thyroid function. However, it is important that families know that the total T4 in many of these individuals may always be low, and thus, any thyroid function studies performed in the future may again raise problems concerning thyroid hormone therapy. Lower TBG levels have also been associated with a variety of pathological conditions in neonate such as prematurity, respiratory distress syndromes, severe hepatic disease, and congenital lipid nephrosis. The finding of a normal TBG level, a low T4, and a TSH that is inappropriately low, suggests the diagnosis of secondary hypothyroidism or hypothyroidism as a result of inadequate production of TSH. This circumstance requires the investigation of pituitary function to establish the presence or absence of other tropic hormones and appropriate treatment can be administered.

Medication

Medications used in the treatment of hypothyroidism have not significantly changed in years. Desiccated thyroid is a product of beef thyroglobulin, which contains both thyroxine and triiodothyronine. A one grain tablet costs approximately 0.8 cents. This remains our cheapest form of therapy. However, the fact that it contains both thyroxine and triiodothyronine (which at one time was thought to be a distinct advantage), has now become a source of difficulty. There have been repeated reports of both adults and children treated for hypothyroidism who developed high levels of triiodothyronine while receiving this treatment.⁹ A switch to L-Thyroxine has reduced the level of triiodothyronine to more appropriate levels. Thus it is possible to induce the state of hypertriiodothyronemia in patients given desiccated thyroid. The statements regarding desiccated

thyroid apply to Proloid. Again, the cost is approximately 1½ cents for one grain tablets. L-thyroxine, chemically synthesized, represents pure thyroxine with a 50mgm tablet being approximately equivalent to 1 grain of desiccated thyroid and costing approximately 1.6 cents. There was reluctance to use this compound for many years since it did not contain triiodothyronine which had been thought to be one of the primary products of normal thyroid production. (In fact, research was conducted to determine the proper ratio of T4 and T3 to incorporate into one medication, so that we might mimic physiologic circumstances.) However, more recent knowledge indicates that the vast majority of triiodothyronine in the circulation is derived from deiodination of the l-thyroxine present.

As a result, it should come as no surprise to learn that patients on l-thyroxine alone have virtually normal concentration of T3. This represents the purest form of treatment and perhaps the best, if not the least expensive. Twenty-five micrograms of triiodothyronine or T3 alone approximately would be equivalent to 1 grain of thyroid. There is limited utility for this particular compound.

Still Debatable

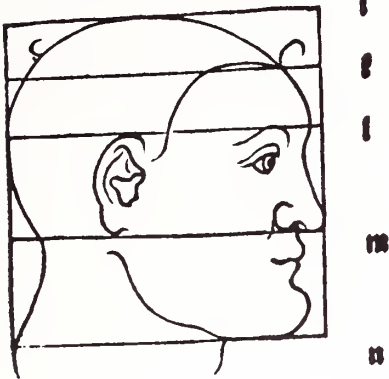
The optimum therapy for hypothyroidism detected, i.e., the patient with a low T4 and an elevated TSH confirmed by venous sampling, is at this point somewhat open to question. The group in Quebec, in order to achieve the earliest state of euthyroidism possible, used the combination of l-thyroxine in a dose of 25 micrograms/day and triiodothyronine in a dose of 5 micrograms three times per day for a period of two weeks.¹⁰ At that time, they switched the child to 50 micrograms of T4 at 6 weeks of age and subsequently adjusted the dose as necessary. Their experience indicates that maintenance doses of l-thyroxine

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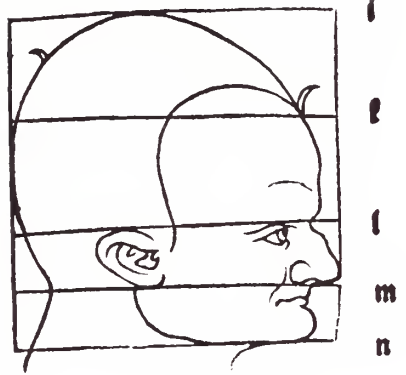
Table VII
Assessment of Neuromuscular Development
by the Griffith Test in
Hypothyroid Infants (12)

	Treated hypothyroid infants (20)		Normal controls (23)
	Mean	S.D.	
Locomotor	119	± 13	116 ± 12
Social	108	± 11	110 ± 8
Verbal	107	± 13	110 ± 12
Fine coordination	111	± 13	114 ± 8
Performance	113	± 18	118 ± 17
Global:	112	± 12	114 ± 8

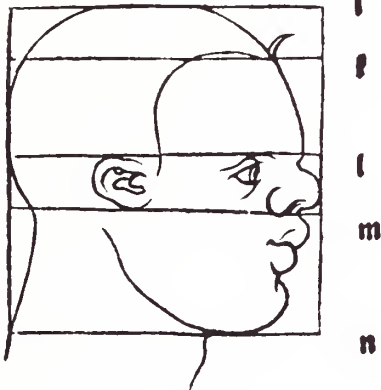
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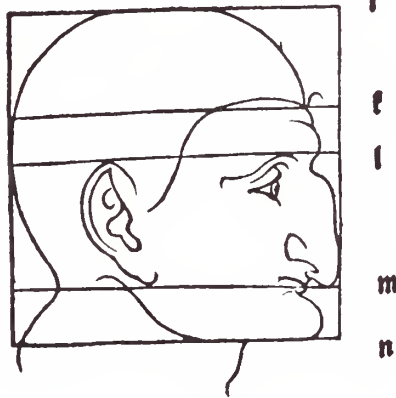
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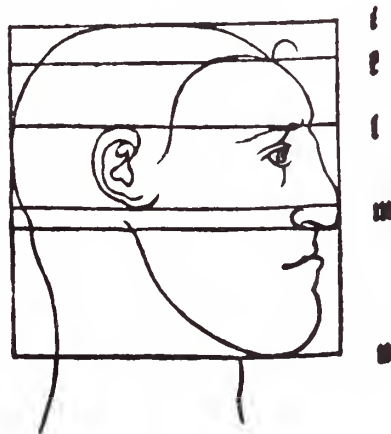
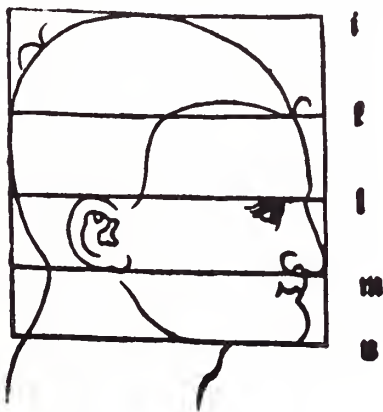
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Cum præter dictas motiones harum trium linearum.f.l.m. et hæc duce, prior, ve
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altum, minus etiam sequens intra.l.m. minime vero imum intra. m. n. In alio
ra hæc utuntur sed conuenienter, ut subiectis exemplis declaratur.



Albrecht Dürer, the master German painter, engraver and theoretician, composed a highly rational 16th Century treatise on human proportions that included this page on profiles in general, noses in particular. Reynolds Historical Library, Birmingham.

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Stead, W.W. and Bates, J., in Harrison's Principles of Medicine,
8th Edition, 1977, McGraw-Hill, p. 900.



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specimens, and confirmation of the positive TINE TEST using the Mantoux method. In general, the TINE TEST does not need to be repeated. Antituberculous chemotherapy should not be instituted solely on the basis of a single positive TINE TEST.

Adverse Reactions: Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons. Pain, pruritus and discomfort at the test site may be relieved by cold packs or by a topical glucocorticoid ointment or cream. Transient bleeding may be observed at a puncture site and is of no significance.

Reference: Diagnostic Standards and Classification of Tuberculosis. National Tuberculosis and Respiratory Disease Association, N Y 1969



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The Pre-school Age Gifted Child

Gayle H. Gear, Ph.D.
Associate Professor
The University of Alabama
In Birmingham

Robert O. Harris, III, M.D.
Associate Professor
The University of
South Alabama

Physicians are often consulted by parents in matters other than the physical health of their children; e.g., emotional well-being and intellectual development. In fact, it is not uncommon for parents to seek advice on educational matters.

Questions in these areas are numerous, especially among parents of gifted children. They inquire about their children's advanced interests, superior learning ability and choice of older playmates. Consequently, the need for additional information regarding the gifted child was explored during a recent meeting of the Child Advocacy Committee of the Alabama Chapter of the American Academy of Pediatrics.

The committee felt that members of the health care community, particularly pediatricians, could assist in the early identification of those youngsters who will require, in many instances, early and intensive stimulation. It was also suggested that they could offer valuable counsel to parents and to the school community concerning the unique problems faced by gifted children.

Involvement of the committee seems particularly appropriate in Alabama since a legislative mandate exists to insure gifted children an education suited to their unique needs, abilities, and interests. Such actions are also consistent with national priorities on behalf of gifted children, recommending early identification and appropriate education.

The Child Advocacy Committee adopted the gifted child as a project. Their first action was to prepare a leaflet for parents concerning the pre-school aged gifted child. Typical questions were drafted and responses prepared by graduate students at the University of Alabama in Birmingham, Barbara Dickey, Ruth Baldwin,

and Marlene Rhodes. Copies of this leaflet will be distributed to pediatricians in order that they may share them with interested parents. The manuscript is introduced next to acquaint physicians with the project and to elicit reactions. The information presented may also serve as a useful guide to physicians as they are called upon to respond to the concerns of parents of gifted children.

The Preschool Years

Education in Alabama's public schools now includes a mandate for the appropriate education of gifted children. Referred to as the Exceptional Child Education Act (106), this insures all exceptional children an education suited to their unique needs and abilities. The goal is to provide early, intensive, and expert instruction in the academics and for the arts.

Questions concerning this legislation and the services which it insures should be directed to the Director of Special Education within the local school district or to the Director of Programs for Exceptional Children and Youth, Alabama State Department of Education.

Recognizing a Precocious Child

Observation seems to be the only reliable method of identifying precocious children. All parents hope for a bright, healthy baby, but very often they are the last to recognize unusual or advanced behaviors in their own child. Instead, friends, relatives, pediatricians, and/or teachers, who usually have greater experience with a wide range of children, are the first to remark on the child's activities. Once precocious children have been identified, parents should be encouraged to ask questions and to seek help in an effort to educate themselves regarding the special characteristics and needs of these children.

We Don't Encourage Comparing Children, But...

Precocious children are advanced beyond their age mates in both verbal and psychomotor development.

Verbal

Early language acquisition and unusually advanced verbal behavior are common traits of precocious preschoolers. An example occurred recently in a pediatrician's office: One preschooler entered the waiting room and commented on the "big pumpkin." A few moments later another child of the same age excitedly exclaimed about the "enormous jack-o-lantern."

"Somehow They Never Stop Talking." In many studies of precocious children, the following have been noted in their linguistic development:

1. Talking before age one with single words soon becoming whole sentences. (Some do not begin speaking early but seem to wait until they are ready to converse in sentences before they say anything.)
2. Consistently using an extensive vocabulary.
3. Showing a quick understanding of and response to spoken language.
4. Using language to classify, e.g., sorting blocks by shape and/or by color.
5. "Playing" with language, e.g., using rhyming words.
6. Learning quickly and demonstrating an unusual display of memory, e.g., recalling a story or an event; knowing the first and last names of all children in a preschool class.
7. Making up stories or poems.
8. Showing an unusual display of knowledge, e.g., knowing the names of city buildings, bridges, cars, etc.
9. Conversing well with adults.
10. Asking many questions.
11. Unusually observing and verbally relating what is seen.

"Read It!" Precocious children show a love of books and frequently demonstrate the ability to read before the age of five as illustrated in the following characteristics:

1. High interest in books and in printed matter. (The first sentence many parents recall is "Read it.")
2. Recognition of the alphabet on blocks and on other preschool toys, particularly before age two.
3. Recognition or "reading" of street signs.
4. Obvious understanding of the association between spoken and written language; knowledge that letters make a word.

5. Recognition of name in print and/or ability to spell it with blocks; knowing address and phone number.
6. Ability to read by age three or four, particularly having been taught. Often the first clue is the child's turning the pages at just the right time while being read to.
7. Interest in writing. (Early readers are often early writers.)
8. Preference for being read to as favorite activity.
9. Demonstration of knowledge of time relationships in stories and in everyday occurrences, e.g., understanding of clocks, of calendars, etc.

Performance

Psychomotor development is frequently, but not always, commensurate with verbal development in precocious children.

"They're into Everything." This is a common cry of parents whose children are going through the terrible twos — or through the year before or the year after. Bright children are no different from "average" children in this regard. They may, however, begin to "get into everything" a little sooner. Parents of these children have cited the following as characteristic of their toddlers:

1. Walking early. (Some children are somewhat slow in this aspect of development, seemingly to permit concentration on verbal skills.)
2. Building towers of blocks, replacing and removing jar caps, particularly before age one.
3. Holding a pencil or a crayon and drawing and/or writing.
4. Learning quickly to button and to tie.
5. Understanding games intended for older children, e.g., Go Fish at age three.
6. Concentrating for long periods of time.
7. Playing happily with older children.

"How Did He Think of That?" Precocious children are often inventive. They frequently devise words or concepts to classify items (toys) and are quite elaborate in their imaginative play. They generally demonstrate the following traits:

1. Ability and interest in finding multiple use for common objects such as boxes, pots, and pans.
2. Invention and construction of objects or toys from cardboard and from other "throw aways."
3. Little domination by external stimuli, e.g., invents own games; is content to play alone.

4. Independence; experiments with or tests situations; highly curious; sometimes a daredevil.

As a Parent, What Should I Do?

There are no hard and fast rules about what a parent *should* do. What is most comfortable for the parent is probably what is best for the child, financially and psychologically. The following questions are frequently asked, but the answers provided should in no way be considered conclusive; they are intended to be suggestions that may be helpful.

1. How much time should parents spend with a precocious preschooler?

Interaction between parent and child is invaluable. Some parents may set aside a specified time each day in which they give the child undivided attention. Others may find this an impossible task. Whatever the plan, the time spent together should be enjoyable. If a parent feels tired and impatient, it is better to postpone this effort to a more appropriate time.

Because bright children are so receptive to language, parents often unwittingly provide an excellent learning opportunity by talking as they work. While cooking dinner or while working in the garden, a parent can provide an interesting experience just by explaining what he/she is doing. Bright children are exceptionally curious and will probably be eager to have parents share in this way.

2. What types of toys are desirable?

The home and the surrounding environment should be as stimulating as possible in relation to the child's age, his interests, and his imagination. In choosing toys and games, parents should remember that the home can be a learning laboratory. Items need not be costly (e.g., crayons, finger paints, records), and some may entail no expense (e.g., cardboard boxes, crates, wood, plastic bottles).

Toys should be fun, interesting, and challenging, and should grow with the child while teaching motor control and basic learning skills. Children should not be given a toy that is far too advanced or too simple as this may discourage them. Perhaps the best rule to follow is for parents to be aware of their child's abilities and to choose toys appropriately. Children should not be overwhelmed with only learning toys; all children need toys to cuddle and to love.

3. What can be done to encourage the child's interest in books and in reading?

Bright children need and want to be surrounded by books. These books should be

both on their level and a step ahead. They should be readily available and accessible, in the children's rooms or on the lower shelves of the family library. At all times these children should be encouraged to read and to believe that reading is an enjoyable activity.

Bright children are often happiest curled up beside an adult who is reading a story. Even after reading "The Adventures of Sammy Squirrel" six times, the child is ready to hear the story again and again while the parent may want to hide the book permanently. Those who begin reading before first grade may still prefer being read to. Although reading to and with these children is time-consuming, it is an invaluable experience for them.

Precocious children also enjoy visiting the library. Parents will find most librarians very helpful in selecting books for the child.

4. Should parents wait for the school to do the teaching?

Parents should not be afraid to teach. One-to-one teaching is not only educationally sound, but it is superior for the very young child. The cue for readiness to learn is the child's own interest and excitement.

The above question is generally asked in connection with reading. Many parents hesitate to teach reading because they feel they are not qualified or because they fear the child will later become bored in school. Precocious children generally teach themselves to read by asking the right questions at the right time. There is never any harm in answering these questions.

Children are constantly learning without formal instruction. Therefore, parents should encourage children to explore and to ask questions. Bright children want answers, but these should be brief; no three-year-old wants a dissertation no matter how intelligent he is.

Children of any age should not be pressured to learn, but neither should they be underestimated. Observant parents, cognizant of the needs and interests of their child, can provide the encouragement necessary for happiness and for appropriate adjustment.

5. How should a preschool be selected?

Private establishments, public facilities, and churches, provide a plethora of day care/preschool opportunities for young children. These range from "mother's day out" babysitting care to preschool kindergartens taught by well-educated personnel. If one is contemplating enrolling his/her child in a preschool situation, the following are worthy of inquiry and/or observation during a visit to the school(s) under consideration.

- a. Teacher-child ratio (Recommended ratios vary according to children's ages.)
 - b. Educational philosophy.
 - c. Activity program, e.g., provisions for creativity, music, motor development.
 - d. Program plan, i.e., babysitting service vs. planned activities.
 - e. Attitudes toward and treatment of children.
 - f. Physical setting, e.g., cleanliness, spaciousness, attractiveness.
 - g. Types of and variety of equipment, books, toys available for children's use.
 - h. Enrichment experiences available, e.g., field trips (to the zoo, to the library, to the park, to the bakery), films, visits by local citizens (policeman, fireman, shop owner).
 - i. Educational background of the director and of the teachers.
6. What about early admission to elementary school?

If a parent feels that his child is too advanced for kindergarten, it is possible to make appointments with the regular school to have the child interviewed and tested. A parent needs to call the school in question and to talk to the principal. Care must be taken not to push the child. Much may be gained by early admission, but a child can also be emotionally damaged if learning is overemphasized. A parent should allow his child to learn at his own rate and in his own way.

The ability to do well on tests is a common characteristic of bright children of school age. Formal intelligence testing done when a child is six correlates relatively highly with intelligence at age eighteen, and such scores are

generally predictive of school performance. Tests for children below age three, however, do not correlate significantly with adult intelligence. Instead, such testing is similar to a pediatrician's examination; it gives a picture of where the child is at a given time.

Some school programs require or recommend testing for the placement of children whose precocious behavior indicates the possibility of admission to a particular preschool program. Such a procedure seems more reasonable in the later preschool years. Because performance on tests of this type can be influenced by any of the factors that shape psychological development, tests should not determine future expectations either educationally or otherwise. Tests should never become a standard by which one gauges a child's behavior.

Testing itself is not necessarily harmful to a child, but what is done with the results can be. Parents who know they have a bright child should feel no compulsion to prove this by tests; they should simply try to meet the child's needs in the home and in the school environment.

A precocious child is a child first, but he is a child who happens to be very bright. His abilities are inconsequential to him since he has known nothing else. As with all preschoolers, parents of bright children should be available to give love, encouragement, and the opportunity for achievement. Helping in this way will enable these children to move toward the goals they choose.

References On Request

— CONTINUED FROM PAGE 36 —

required to maintain a T4 above 10 with a TSH below 15, is 5 micrograms/kilogram. The group in Oregon has found that a dose of 50 micrograms a day of T4 will reduce TSH to virtually normal levels in a period of approximately 2-4 weeks.¹¹

The investigations in Quebec provide the only data with any attempt to measure intelligence in groups of patients detected by neonatal screening. At this time, the Griffith I.Q. test on children from 12-18 months indicate no significant difference between control and the treated hypothyroid population (Table 7).¹² The difficulty in assessing the levels of intelligence at this age is quite familiar. Nevertheless, these are the only quantitative data available at this time.

Future data will provide us with a more definitive answer concerning the efficacy of neonatal screening programs. Institution of early therapy of

cretins should reduce the number requiring institutionalization. The cost of an early diagnosis of each infant with congenital hypothyroidism with an incidence in one in 5,000 would be approximately \$5,000. One can assume that the 20% of infants with a delayed diagnosis with I.Q. values below 50 would require institutional or residual care at the cost of \$5,000 annually for 30 years. An additional 50% of late treated infants will require special education at an estimated cost of \$3,000 yearly, in excess of the average cost of educating a normal child for years.

Thus, the added cost of special education care for 10 infants with congenital hypothyroidism in the absence of an early detection, might approximate \$480,000. The cost of screening 10 infants would not exceed \$200,000. In addition, the 10 infants treated early might well be productive citizens.⁵

— References On Request —

The Children's Hospital Expansion Program

J. E. Stibbards
Executive Director

The Children's Hospital announces that as a result of a long-range study to provide for major changes in pediatric health care in Alabama during the next 25 years it will develop a major addition which will provide for expanded roles and consolidate a number of pediatric agencies currently located throughout the UAB Medical Center.

These providers include the Children and Youth Program, the Alabama State Crippled Children's Service in Birmingham, the Speech and Hearing Program for pediatric testing and therapy, and the School Athletic Program, a support function of all schools in the Birmingham area.

The 160-bed non-profit facility, located immediately adjacent to the University of Alabama in Birmingham Medical Center complex, saw patients from every county in the

state in 1978. Approximately 90,000 patients were seen through the hospital's emergency room and specialty clinics and another 10,000 were admitted as inpatients.

In close affiliation with the UAB Departments of Pediatrics, Anesthesia, Surgery and the UAB School of Dentistry, the hospital conducts a major teaching program. Residences are offered in medical and surgical specialties, anesthesia, graduate nursing, physical therapy, dentistry, medical technology, play therapy, dietetics, hospital administration, pharmacy, respiratory therapy and other specialties.

The Children's Hospital operates a round-the-clock Poison Control Center for parents and physicians, to provide consultation to those whose children have accidentally ingested or come in contact with potentially toxic substances.

A licensed pharmacist supervises the calls and provides information on symptoms and treatment alternatives. Callers are advised to contact a physician if medication is indicated. Phone 205-933-4050, and 934-4606 (MIST line)—The new toll-free number is 1-800-292-6678.

The Children's Hospital operates a Regional Referral Burn Center, treating both minor and highly complex burn problems. Patients last year were admitted from Alabama, Georgia, Mississippi and Louisiana.

The hospital is participating in the International Year of the Child. By developing the four main aims of the "Speak Up For Children" campaign — nutrition, health education, immunization, accident and poison prevention — the hospital believes that its pledge to treat the "total child" can be met.

Now there's help for the alcoholic patient.

More than ever before, physicians are facing this problem. Now, there is an answer.

After extensive research, Brookwood Health Services has developed the Alcoholism Recovery Program which is offered by Brookwood Lodges at Valley Springs, Alabama.

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This program is approved by Blue Cross and most other major health insurers. It is the only program of its kind in Alabama.

When an alcoholic patient turns to you for help, contact Dr. Jack C. Whites at Brookwood Lodge/Valley Springs, Warrior, Alabama. Phone 647-1945.



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PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

ANESTHESIOLOGY: Age 36; Andhra Medical College, 1963; seeking practice in specialty or associate in a town with a population of 25,000 or more. Available July 1979. LW-02179

FAMILY PRACTICE: Age 31; University of Alabama, 1974; Board Eligible in Family Practice; seeking general practice preferably in the southern part or on the coast. Available immediately. LW-02279

FAMILY PRACTICE: Age 37; Ranga Raya Medical School, 1972; will be American Board Eligible in 1979; seeking practice in specialty preferably in Birmingham and suburban areas. Available July 1979. LW-02379.

INTERN: Age 31; UAB 1975; seeking practice in Internal Medicine in south Alabama or Mobile area. Available 1980. LW-02.

INTERN: Age 29; UAB 1975; seeking practice in General Surgery/General Practice in city of 50,000 to 150,000 population. Available July 1979. LW-03.

INTERNAL MEDICINE: Age 36; Medical College of Georgia, 1973; American Board Certified in Internal Medicine; seeking practice in specialty preferably in the southern part of Alabama. Date Available for practice is open. LW-11178.

INTERNAL MEDICINE: Age 32; Northwestern University, 1972; American Board Certified in Internal Medicine; seeking practice in primary care in a town with a population of 10,000 to 30,000. Available May 1979. LW-02479.

OBSTETRICS & GYNECOLOGY: Age 30; Meharry Medical College, 1973; will be American Board Eligible in 1979; seeking practice in partnership, single specialty group or multi-specialty group. Available as of July 1979. LW-13835.

OPHTHALMOLOGY: Age 28; Duke, 1976; seeking practice in Ophthalmology or Academic in a town of 75,000 plus population. Available January 1981. LW-02579.

ORTHOPEDICS: Age 30; University of Alabama, 1973; National Board; seeking practice in the Northern section of Alabama in a town of 30,000 or more population. Available July 1979. LW-09378.

PSYCHIATRY: Age 44; University of Toronto, 1959; American Board Certified; seeking practice in Psychiatry preferably in the southern section of Alabama. Available for practice in the near future. LW-02679.

PSYCHIATRY: Age 28; University of Iowa, 1976; American Board Eligible in June

1979; seeking practice in specialty or private practice. Available July 1979. LW-09578.

ORTHOPEDIC SURGEON: Age 31; Medical College of Georgia, 1972; seeking practice in town of 50,000 population. Available August 1979. LW-701.

ORTHOPEDIC SURGEON: Age 30; University of Tennessee, 1973; American Board Certified; seeking practice in specialty in a town with a population of 15,000 or greater. Available for practice January 1980. LW-11478.

SURGEON: Age 21; UAB 1973; National Board; seeking associate practice in town of 25,000 plus population. Available July 1979. LW-400.

SURGEON/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single specialty group or solo. Available July 1979. LW-12031.

SURGEON: Age 34; Vanderbilt 1970; National Board; seeking practice in town of 10,000-200,000 population. Available September 1979. LW-401.

PHYSICIANS WANTED (Opportunities for Practice)

PEDIATRICIAN—Wanted to join established three man pediatric group. All are board certified. Excellent fringe benefits from our professional corporation. Unlimited recreational activities with quality schools and churches in this metropolitan central Alabama city. PW-16.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

RADIOLOGIST—Must be experienced and capable in all phases of special procedures including angiography, ultrasound, CT, and nuclear medicine. Immediate opening in expanding multispecialty private hospital in progressive city of 50,000 in Southeast Alabama. Salary open to negotiation. PW-27

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles northwest of Birmingham. May begin as associate working with three other physicians or solo

GENERAL SURGERY: Age 32; Case Western Reserve Univ., 1974; seeking practice in solo or group practice. Available July 1, 1979. LW-02879.

GENERAL SURGERY: Age 34; Temple University, 1969; American Board Certified; seeking practice in a town with a population of more than 50,000. Available November 1979. LW-02979.

GENERAL SURGERY: Age 29; University of Mississippi; seeking practice in Alabama. LW-02779.

SURGERY: Age 45; Tufts University, 1957; seeking assistant or associate practice in a town with a population over 50,000. Available December 1979. LW-021079.

UROLOGY: Age 30; Yale Univ., 1974; National Board; seeking associate practice or hospital-based practice. Available June 1979. LW-800.

UROLOGY: Age 31; New York Medical College, 1974; seeking practice in a group, partnership or solo. Available July 1, 1979. LW-07278.

working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles — population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic are provided by residents of the family practice residency training program on a rotation basis. The clinic is in its third year of operation. The city is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.



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FAMILY PHYSICIANS—Two (2) General Surgeon one (1) either or two offices in Mobile. Flexible arrangements in a very small group. G. L. Spafford, P.O. Box 160272, Mobile, AL 36616.

ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

Outstanding multi-hospital emergency group has excellent opportunities available in Greenville, Mississippi. Fly to Mississippi, work 6-16 shifts, spend the other 20 days in California. Fee-for-service. Malpractice insurance provided. No accounting, billing, or personnel problems. Contact: Garland Holloman, M.D., Delta Medical Center, 1400 E. Union Street, Greenville, Mississippi 38701 (601) 378-3783 or John Stein, 897 MacArthur Boulevard, San Leandro, California 94577 (415) 638-3979.

FP's, Ala. & Missouri, \$40,000 guarantee, moving, free rent, other: C.V. to Dr. R. E. Wiltzie, P.O. Box 57026, Birmingham, Ala. 35209.

The University of Alabama in Birmingham (UAB) is seeking a Program Director for the Internal Medicine Residency Program in Montgomery, Alabama, the state capitol. Currently there are 15 residents in this general internal medicine program which is supported by state appropriations and affiliated hospital funding including two VA hospitals in Montgomery and Birmingham and several private hospitals. Responsibilities of the position are to maintain, direct, and further develop an excellent training program in general internal medicine based in the Montgomery area but with close ties to the UAB Medical Center in Birmingham. The position is a faculty position in the Department of Medicine at UAB at a rank appropriate for the incumbent. Applications should be addressed to C.G. Cox, Dean's Office, School of Medicine, University of Alabama Birmingham, Room 305, Medical Education Building, University Station, Birmingham, Alabama 35294. Deadline for receipt of application is March 1, 1979. The University of Alabama in Birmingham is an equal opportunity (M/F) affirmative action employer.

WANTED: Board Certified Internist to do insurance type office medical examinations in Alabama. Excellent remuneration. Apply: Dr. Escoffery, 16820 South West 274 Street, Miami, Florida 33031 (305) 247-7285.

RADIOLOGY—Seeking position as Locum Tenens in General diagnostic roentgenology. Alabama license and insurance. Neal S. Flowers, M.D., 209 Langham St., Monroeville, AL 36460.

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The State Committee of Public Health took the following actions at its meeting on December 20, 1978:

- Approved the rabies fee of \$4 per head for public clinics for 1979.
- Received a report of the epizootic of rabies taking note of the outstanding contribution by the Public Health Laboratory in examining 32 animal heads during the last month and reporting 90% the same day they were received in the Lab.
- Noted that the 32 animal heads examined in one day, November 28, 1978, was the largest number in the history of the Lab and the six positives also set a record for one day and further that three positive heads for one county added to this record.
- Approved a list of proposed bills to be introduced to the Legislature which included amendments to the Venereal Disease reporting law.
- Approved the sharing of Juvenile Onset Diabetes reports with the University of Alabama in Birmingham Medical Center for followup and study.
- Took note of an Attorney General's Opinion governing the expenditure of conditional appropriation funds made available by Gov. George C. Wallace to assist in solving urgent health needs, particularly in the counties.
- Received, for review and comment, proposed rules and regulations for the Certificate of Need Program and approved the schedule for implementation.
- Approved amendments to Health Systems Plans for the Birmingham Regional Health Systems Agency dealing with CAT Scanning and deferred action on the BRHSA Plan change dealing with nursing home bed needs for further study.
- Concurred in amendments to the North Alabama Health Systems Agency Plan reallocating nursing home beds to be consistent with the State Medical Facilities Plan.
- Approved initial issuance of Assurance of Need for 10 health facilities.
- Made favorable findings and recommendations for an application for Shoals Hospital, Sheffield, for cost over-run and recommended that reimbursement be withheld for one year.

The following actions were taken by the State Committee of Public Health at its meeting on January 17, 1979:

- Received a compilation of Vital Statistics Laws Citing the Code of Alabama, 1975, for easy reference and referral.
- Approved the distribution of funds for emergency financial assistance to the Local Health Departments in the amount of \$223,500 as specified by Act 597 of the Regular Session of 1978 (the Appropriations Bill) relating to conditional appropriation released recently by the Governor.

approved and other corrective measures and safeguards are being instituted and deferred further action until the next monthly meeting for a progress report.

- Received information on improved communications between the SHPDA and HSA Directors.

- Gave favorable findings and recommendations to the following facilities: Elba Nursing Home, Elba, for an addition of 12 skilled and 12 intermediate care beds; and the Chattahoochee Valley Artificial Kidney Center, Langdale, for renovation of space and provision of six renal dialysis stations.

- Gave adverse findings and recommendations for Kirkwood by the River, Birmingham, for a 51 skilled bed addition to a health facility because of failure to conform to the Medical Facilities Plan.

- Approved a Memorandum of Understanding regarding End Stage Renal Disease between the SHPDA, SHCC and Network Coordinating Council 18.

- Approved a schedule for the Certificate of Need Program implementation and also advised of the urgency for early legislative action to provide two amendments required by DHEW.

- Approved a reply to Medical Services Administration inquiry and request regarding greater controls over skilled nursing facility and intermediate care facility beds and their distribution.

- Denied a request for appointment of a non-medical health officer for Hale and Perry Counties.

- Received, for further consideration, the final draft of Part III, Regulations Governing Delegation of Subdivision Primary Enforcement Responsibilities and Part IV, Regulations Governing Information Submittals for Property Divided Into Lots Not Less Than Three Acres in Size, for action at the February meeting.

- Received a Perinatal report from Robert L. Goldenberg, M.D., Director of the Bureau of Maternal and Child Health of the State Health Department, reporting the need for better perinatal and maternity care.

- Received a report of the Council on Animal and Environmental Health for the December, 1978, meeting.

- Was advised that as a result of a public hearing on Food Regulations, a redraft and further modifications of these regulations is being made following the suggestions and discussion received.

- Took note that the Clinical Laboratory Administration of the State Health Department, advises that 38,695 newborns have been screened for hypothyroidism and five cases of Primary Hypothyroidism and one infant with Congenital Thyroxine-Binding Globulin Deficiency gives an incidence of Hypothyroidism of 1 per 6449. This rate compares favorably with nationally expected screening results.



Mrs. Aubrey E. Terry
President, A-MASA

The Hospice Concept

The later part of October, I attended the 1978 Leadership Confluence of the AMA Auxiliary in Chicago. One of the seminars dealt with the Hospice Concept. I would like to share some information from a paper by William M. Markel, M.D., and Virginia B. Sinon.

"The hospice concept of care for the terminally ill, long practiced in Europe, has recently been gaining acceptance in the United States. Changing attitudes toward health care in general and toward the care of the dying in particular have created a milieu favorable to the development of programs based upon the hospice model.

"The term 'hospice' derives from a medieval word for a place of shelter for travelers on difficult journeys. The current use of the term to describe institutions designed to control and relieve the emotional and physical suffering of the terminally ill comes from Britain, where many hospices have been established in the last 10 years, most notably, St. Christopher's Hospice, a 54-bed facility in London.

"With St. Christopher's as their model, several hospice programs have been established in the United States and more are in various stages of planning. While there may be differences from one program to another, essential characteristics must be present if a particular program is to legitimately use the term "hospice."

"A hospice is an autonomous, centrally administered program of

coordinated in and out patient services. This physician directed program of health care delivery employs a multifaceted approach: narcotic and non-narcotic analgesics are used in physical symptom control, and the interdisciplinary hospice team provides psychologic, sociologic and spiritual services as they are needed.

"The patient and family is the primary unit of care and services are available on a 24-hour, seven-day-a-week basis. Hospice services are also available to the family during the period of bereavement.

"The psychological and social problems that confront both the terminally ill patient and the patient's family are often more distressing than the disease itself; they have extremely urgent and practical concerns. Depression and anxiety plague the relatives of the terminally ill as well as the patient.

"In the face of the demanding process of caring for a terminally ill person, family members often deny their own needs. This can lead to feelings of neglect and resentment. The hospice team is attentive to these needs as well as those of the patient. It has been observed clinically that those who are actively involved in the process of care while the patient is alive are less prone to guilt and self-criticism after death than those not involved.

"One of the major goals of a hospice program is to maintain the patient's quality of life. This involves taking those measures necessary — whether pharmacologic,

psychologic or spiritual — to keep the patient at his or her optimal level of functioning.

Perhaps the most innovative aspect of the hospice program is its method of delivering pain medication to patients. Generally, these drugs are self-administered by either the patient or family members. The intention here is to free the patient from dependence upon staff for pain relief and to assume responsibility for the control of his or her pain.

"Symptom control involves more than the administration of medication. An environment that is peaceful and secure, with quality professional care and family and personal involvement all play a role in the relief of pain.

"The hospice team provides just such an approach, treating the whole person. The typical team includes the following specialties: social work; occupational, physical and speech therapy; a variety of consultant services (e.g., psychiatric, radiologic, etc.); pastoral care.

Physician Supervision

"These services are directly supervised by a physician. While the hospice team is supervised by a physician the major burden falls upon the nursing staff.

"Currently, these innovative programs are dependent upon grants (whether public or private) and donations. Standards and certification procedures will have to be established. A number of reports indicate that hospice care is much less expensive than acute care hospitals.

Heller



Health Services For North Alabama

by COLIN CAMPBELL, M.D.

Dean, School of
Primary Medical Care,
The University of
Alabama in Huntsville

The service function of the UAH School of Primary Medical Care has necessarily developed hand in hand with its educational programs. It has been part of the philosophy of the school from its beginning that medical students and residents would spend the bulk of their time in patient care settings, particularly in outpatient settings.

It has also been accepted from the outset that a community-based medical school in North Alabama oriented toward primary care would utilize the help and facilities of the medical community but would also develop patient care settings of its own as required by the school's educational programs.

"The large group of excellent physicians" in the Huntsville area, in the words of the McCall Report, and the presence in Huntsville of four hospitals and other health and service facilities were important reasons for the location of the School of Primary Medical Care and have been essential factors in the School's healthy growth. Beyond Huntsville and its immediate vicinity, SPMC students and residents have been welcomed into physicians' offices, hospitals, and health agencies all across North Alabama.

Provision of Primary Care

Nonetheless, since the UAH School of Primary Medical Care was established to educate future physicians to meet identified health care deficiencies in the state, it is not surprising that it was necessary for the school to provide an additional and major facility in which students could participate

actively in the provision of primary health care. The UAH Ambulatory Care Center is such a setting that did not previously exist in which educational programs emphasizing primary care and preventive health maintenance are carried out. As the school has matured, faculty members have also brought to the region and have demonstrated to the students needed consulting and tertiary care services that enhance the quality of medical care in North Alabama.

In providing its educational programs, the UAH School of Primary Medical Care has developed, or cooperated in developing, health care services of a type and to a population that would not otherwise receive these services. 30% of the patient visits at the UAH Ambulatory Care Center are by medically indigent patients, a higher indigent load than the Family Practice program should carry while still maintaining the broad social and economic spectrum that is required of family practice residencies. As is usual in the United States, patients of the Ambulatory Care Center are seen on a fee-for-service basis. Nonetheless, of the nearly 110,000 patient visits in the three years since the Center opened, about 33,000 have been in the medically indigent category.

To a number of people for whom health care was geographically or financially beyond their reach the school has provided services in neighborhood centers. Family Practice residents and faculty have staffed the Westside Medical Center since it opened early in 1974 in the Westside

Neighborhood Center in south west Huntsville. Many people in that part of the city can be classified as the "working poor" who are ineligible for Medicaid but do not have enough income to pay the family medical bills. Currently patients are seen at Westside five half-days a week by Family Practice faculty and residents and once a week by Ob/Gyn faculty in a clinic conducted by the Planned Parenthood Association of Madison County. Ob/Gyn faculty also provide consultation and family planning at the Cavalry Hill Friendship Neighborhood Center one day a week for the Madison County Community Action Agency.

Before the School of Primary Medical Care had full time faculty members in Obstetrics and Gynecology, a group of private obstetrician-gynecologists operated a maternity clinic in the Madison County Health Department. Today the SPMC Obstetrics and Gynecology faculty, assisted by family practice residents and medical students, provide all the physician staffing for this clinic, which is the only obstetrics service offered by the Health Department. The school provides comprehensive prenatal, labor and delivery care, and post-partum follow-up for about 250 Maternity Clinic patients yearly. Many of the patients of the Ob/Gyn Clinic, held five days a week in the Ambulatory Care Center, are also medically indigent or nearly so and constitute a patient population that was largely without medical services before the Clinic opened.

Tertiary Care Clinics

The faculty in Obstetrics and Gynecology also hold two weekly tertiary care clinics in the Ambulatory Care Center. The Infertility/Endocrine Clinic is conducted by the Ob/Gyn faculty with Dr. Makram Bactor, SPMC Associate Professor of Internal Medicine, the only reproductive endocrinologist between Nashville and Birmingham. The Cervical Dysplasia and Gynecologic Oncology Clinic is attended once a month by consultants from the faculty in Gynecologic Oncology of the University of Alabama School of Medicine in Birmingham. Both these clinics are the first of their kind in the Huntsville area. In the estimation of Dr. George W. Corner, the School's Chairman for Obstetrics and Gynecology, mortality from gynecological cancer is second only to infant mortality and morbidity

among North Alabama's Ob/Gyn problems.

In attempting to improve perinatal health in this region, the school's Ob/Gyn and Pediatrics faculties have worked with the administration, medical and nursing staffs of Huntsville Hospital to establish the North Alabama Perinatal Center. The first of the regional perinatal centers in the state to become fully operational, the North Alabama Perinatal Center has been funded for a year beginning October 1, 1978, by the State Bureau of Maternal and Child Health.

Hard Work

"The Center," in Dr. Corner's words, "is the result of much hard work by many dedicated people and a beautiful example of cooperation between the School and the Hospital." Co-directors of the North Alabama Perinatal Center are Dr. M. Jean Quirante, SPMC Assistant Professor of Pediatrics and Director of the New born Intensive Care Unit at Huntsville Hospital, and Dr. John A. DiPlacido, SPMC Assistant Professor of Obstetrics and Gynecology, who succeeded Dr. Corner as Co-director in September. Dr. Quirante was the first neonatologist in North Alabama when she joined the SPMC faculty in 1973.

The Physician-Directors are quick to point out that much of the work of the Center, particularly in educational outreach, is being accomplished by the two Perinatal Educators, Sharon Jones, R.N., B.S.N. (Obstetrics), and Susan Scruggs, R.N., B.S.N. (Nursery). Miss Jones and Miss Scruggs have already made site visits to determine perinatal resources at all twenty North Alabama hospitals that provide perinatal care and have conducted classes or arranged for the Center physicians (all SPMC faculty) to teach classes for physicians and nurses at many of these hospitals.

In the past 6½ years, Huntsville Hospital has received nearly 900 neonatal transports from northern and central Alabama and southcentral Tennessee. Maternal transports, which began on a regular basis with the establishment of the Perinatal Center, currently average two or three a week from North Alabama communities as far west as Red Bay and as far east as Centre

Of the 18 high-risk pregnancies transferred to Huntsville Hospital from

late May through November of 1978, there were fifteen deliveries, including three sets of twins. Sixteen of these eighteen babies survived, indicating the benefit of transferring high-risk infants while still *in utero*. Patients are also referred to the Center from the thirteen North Alabama counties for consultation and especially for ultrasound examination and amniocentesis.

Cooperative Effort

The Well Child Clinic in the Ambulatory Care Center is another co-operative effort made possible by the presence of the school's faculty and carried out under their director. The Clinic is one of several services for which a need had been recognized by various agencies in the Huntsville area.

The Junior League of Huntsville, United Way of Madison County, and Huntsville Hospital have taken the lead with the School of Primary Medical Care in establishing the Well Child Clinic, finding funds for operation, and participating in the Clinic's work. Community pediatricians and other physicians on the volunteer faculty give time to service and teaching in the Well Child Clinic. The SPMC Chairman for Pediatric Programs, Dr. John R. Montgomery, directs the Clinic, which is funded for its first year through a grant to Huntsville Hospital from the Appalachian Regional Commission.

The present weekly Well Child Clinic has been planned to serve as parent, model, and training ground for eventual satellite well child clinics in this area. It is a model in several senses: it illustrates how a particular form of health care may be organized and delivered, how community groups can cooperate in an on-going health service project, and how a community-based medical school can further the education of its residents and students through providing the medical care that makes such a project possible.

The Clinic is also a model for parents in the benefits of preventive health care and maintenance through regular check-ups. As the first comprehensive preventive health care service in the area for children of low-income families, the Well Child Clinic draws a patient population that had previously regarded preventive health care as a luxury it could not afford. In addition to educating parents in nutrition, health hazards, and children's developmental phases, the Well Child Clinic

attempts to instill an attitude that the maintenance of good health is worth paying for—and is also in the long run economical. However, in keeping with its role in patient education, no one is turned away from the Well Child Clinic because of inability to pay.

Mrs. Kathleen Boland, the Nurse Practitioner in the Well Child Clinic, who handles much of its operation and patient care, reports that in its first half year the Clinic has already detected and treated or referred a number of children with congenital deformities or failure to thrive that could have been life-threatening or permanently disabling if not diagnosed early. A ten-day-old boy referred to the Clinic by the Huntsville Hospital Nursery because of low birth weight was found to have bilaterally dislocated hips. Quick referral to the Crippled Children's Center for treatment averted the human tragedy of permanent crippling and the resultant financial burden on the community.

The Developmental Disabilities Clinic conducted by the SPMC faculty in Family Medicine and Pediatrics is another comprehensive "one service" clinic that did not exist in the Huntsville area until the School of Primary Medical Care was established and able to assume the key role in its operation. Like the Well Child Clinic, the Developmental Disabilities Clinic was established and is operated through the active cooperation and participation of a variety of agencies in and near Madison County. James W. Fleming, Ph.D., Assistant Professor of Pediatrics and of Family Medicine, organized the Developmental Disabilities Clinic and has served as Coordinator since it opened in October, 1977.

Interdisciplinary Team

The Clinic brings together each month at one time and in one place Family Practice faculty and residents, mental health professionals, social workers, and medical students on pediatric rotation. This interdisciplinary team examines children and young adults with developmental problems to make an assessment of needs and specific recommendations for rehabilitation programs to referring physicians and agencies. Patients are often referred for therapy to such participating agencies as the Crippled Children's Service and the Huntsville Rehabilitation Center.

To date, the Clinic has seen 75 patients. Professionals in the Huntsville area who have been working with developmental disabilities over the years have been enthusiastic about the comprehensive services possible only through an integrated clinic of this kind. From the School's point of view, such an approach provides a good vehicle for training family practice residents and medical students in comprehensive care and in utilization of multiple community resources.

Two tertiary care pediatric clinics in the Ambulatory Care Center are made possible through the participation of Pediatrics faculty from the University of Alabama School of Medicine in Birmingham. The Cystic Fibrosis and Chronic Pediatric Pulmonary Disease Clinic is held monthly, and the Pediatric Nephrology Clinic is held every two months. No clinics of either type were conducted in North Alabama before the existence of the School of Primary Medical Care.

Some of the increased capacity for patient care in North Alabama results from consultation services by SPMC faculty to North Alabama physicians and from the care of service patients at Huntsville Hospital. All hospital service patients in both Medicine and Obstetrics/Gynecology are cared for by SPMC faculty, assisted by family

practice residents and medical students.

The approximately 1,000 patients admitted to Huntsville Hospital in 1978 under the service of the SPMC Chairman for Internal Medicine, Dr. J. Ellis Sparks, comprise all patients admitted to Medicine without a previously designated physician, plus referral patients requiring hospitalization.

In addition, the Internal Medicine faculty, particularly the endocrinologist, Dr. Boctor, and Dr. LeRoy Harris, specialist in infectious disease, provide consultation services for hospitalized patients of private physicians.

Patient Care Essential

Patient care is essential to the School's basic educational function. The Nature and scope of the School's patient care activities are determined by its commitment to education for comprehensive forms of health care that will detect problems early, manage them consistently, and most important, teach people how to keep health problems from occurring in the first place.

The extent to which the School's health services are part of community and regional endeavors augurs well for the continued improvement of health care in North Alabama.

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Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

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Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence, can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), i.e., phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function, avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

INJECTABLE: Although promptly controlled, seizures may return; readminister if necessary, not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported, should these occur, discontinue drug

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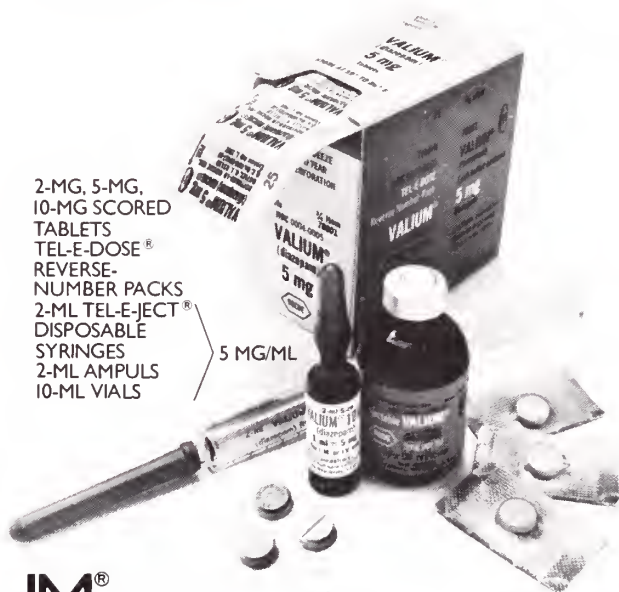
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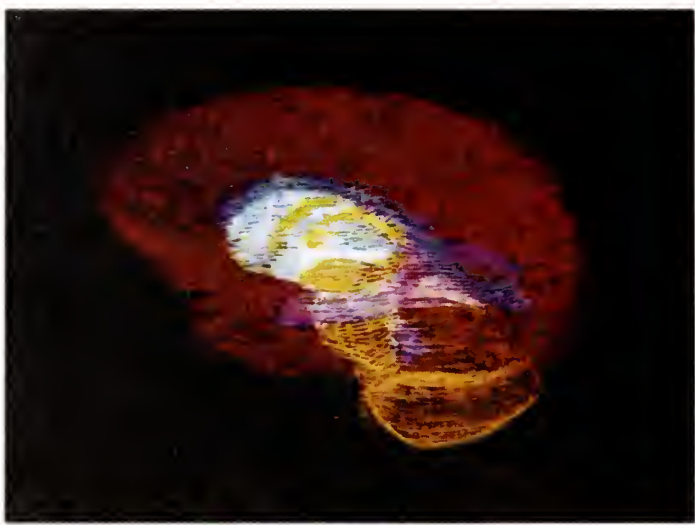
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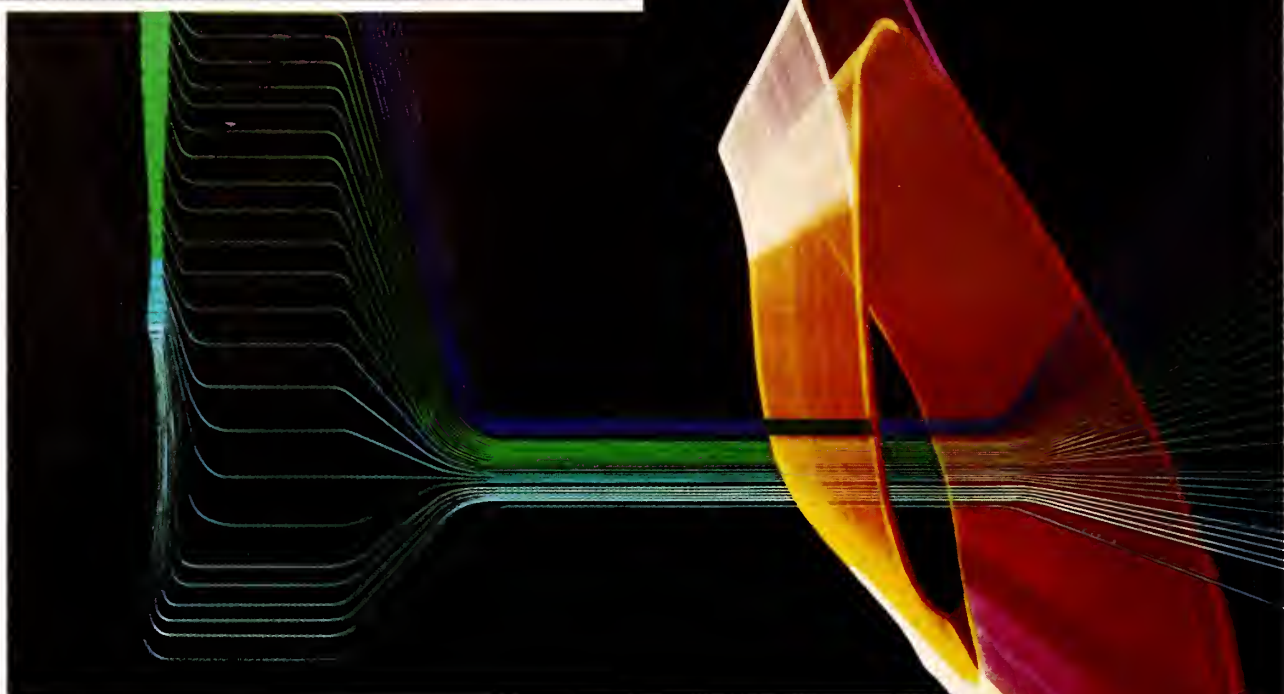
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Use in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over-sedation.

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It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

ADVERSE REACTIONS:

Dermatologic: Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

Gastrointestinal Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

Vascular There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angitis which have led to irreversible hepatotoxicity and death.

Hematopoietic Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim[®] (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

Neurologic. There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

Ophthalmic. There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

Drug Idiosyncrasy Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

OVERDOSAGE: Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

HOW SUPPLIED: 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)



Wellcome

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FROM THE EXECUTIVE DIRECTOR

Professionalism As A Dirty Word

As far as the prophetic eye can see there will be an albatross around the neck of organized medicine.

That albatross is the incredibly overreaching decision last November of Administrative Law Judge Ernest G. Barnes in the case of the Federal Trade Commission versus the American Medical Association, the Connecticut State Medical Society and the New Haven County Medical Association.

Judge Barnes, eagerly embracing the latest FTC dispensation that medicine is not really different from canned tomatoes or fresh cabbage, simply declared an immediate end to professionalism in all its manifestations. All forms of advertising and soliciting are for the good of the public and the Republic, Judge Barnes decreed, and there can be no ethical or disciplinary controls over it.

Striking even closer to the heart of what professionalism is all about, Judge Barnes ordered the AMA (and theoretically all of organized medicine) to cease and desist:

"Restricting, regulating, impeding, advising on the ethical propriety of, or interfering with the commercial terms or conditions on which any physician contracts or seeks to contract for the sale, purchase or distribution of his or her professional services."

Translation: Anything goes and professional organizations are enjoined against doing anything about it. Ethics, discipline and order shall henceforth be considered in restraint of trade.

The order remains in effect until modified or finally disposed of. The AMA's appeal goes first to the full FTC sitting as a judicial panel to review its own actions at another level, thence to the U.S. Circuit Court and finally to the United States Supreme Court, where a final opinion and order might be entered in three or four years.

Unless there is some relief before then, medicine could degenerate into the bad old days before the reforms that came in the wake of the Flexner Report of 1910. There may not even be anything to prevent the return to diploma mills, since the logical inference to be drawn from Judge Barnes' sweeping order is that quality control in any of its forms might be considered in restraint of trade.

Who will benefit from this calculated chaos? Certainly not patients, who will have almost no defenses at all against hucksters and charlatans.

These are dispiriting times, but they will pass because the public will eventually demand a return to professionalism.

The real danger and the real tragedy lie in what great damage may be done in the interim.



S. Lon Conner

MASA's Second Washington Trip

Hiliary H. Henderson, Jr., M.D.



It was a pleasant and productive occasion Feb. 4-5 when 104 Alabama physicians and their wives gathered in Washington for the second year to host the Alabama congressional delegation.

That the congressmen themselves have also come to value the informal get-together was evident by the fact that Senator Howell Heflin and all seven of the state's U.S. Representatives were there.

There were no axes to grind, no special requests made by our group. It was a Sunday night gathering, with the reception and dinner, followed Monday by our tour of the White House and a briefing by AMA's very capable Washington staff.

Such contacts as these are important to get acquainted with our Congressmen so they will know that we care about the leadership they are providing the state in Washington. And, in getting to know some of us, they are more likely to call on us for our views when important health legislation appears before one of their committees or on the floor of the Senate or House.

Too often, Americans let the single-issue lobbyists, with their full-time capital offices, speak for them by default. It is only through involvement in the total process of government that we can become a respected participant in it.

We want our congressional delegation to know that while we care very much about the future of medicine and its effect on the American people, we are also interested in all legislation bearing on our strength as a nation at home and abroad.

In other words, the principal image we want to project to our congressmen is the one we have here at home: we are simply good citizens interested in good government.

I think we have achieved that objective in two trips to Washington in as many years.

I hope that we can maintain this good relationship in the future with subsequent trips to Washington.

Those of you who could not make the trip should try to get to know your Congressman, to insure the best possible health care for the people of Alabama. And there is no better way than direct personal contact.

Cooperate with your elected Representatives and keep them informed of our problems. Let them know what you think. That is the only way they can represent you.

I want to personally thank all the doctors and their wives who made the Washington trip. Looking forward to seeing you in Birmingham at our annual session April 19-21.

Hiliary H. Henderson Jr.

Blue Cross is encouraging Alabamians to give health care costs a run for their money.



As a doctor, you don't need to be told what's happening to the cost of health care. You also don't need to be told about the benefits of regular exercise and a healthy lifestyle.

But the public *does* need to be told. And at Blue Cross and Blue Shield, we're telling them. In newspaper ads, television commercials and billboards, we're encouraging Alabamians to work for better health and lower health care costs. By exercising, eating right and seeing their doctors regularly.

Together we can tell all Alabamians that staying healthy is the best way to hold down the high cost of health care.



**Blue Cross
Blue Shield**
of Alabama

A Community Medical Education Program In Montgomery

by J. J. Kirschenfeld, M.D., Director

Montgomery Internal Medicine Residency, Professor of Medicine,
Associate Dean for Montgomery Affairs, University of Alabama in
Birmingham.

Medical Education came to Montgomery late in 1968 when a committee was appointed by the Montgomery County Medical Society and was charged with the mission of developing an undergraduate and graduate medical education program for the benefit of the practicing physicians.

The committee, with the help of Dr. Tinsley Harrison who was then in retirement, first developed an elective in medicine for junior and senior medical students from the University of Alabama in Birmingham. The institution developed was the Montgomery Regional Medical Foundation, Inc., representing the Montgomery hospitals and their medical staffs, and the County Medical Society.

The teaching faculty consisted of physician volunteers practicing in the community, and the participating teaching hospitals were St. Margaret's Hospital and Baptist Medical Center. Clinical affiliation with UAB was established through Dr. T. J. Reeves, then Chairman of the Department of Medicine, and Dr. Clifton Meador, then Dean of the University of Alabama Medical College.

Several junior and senior medical students were recruited early in 1969; in July, 1969, two interns arrived from the University of Alabama for a Rotating Internship in Medicine which was accredited, largely through the efforts of Dr. Harrison. Soon thereafter, a small grant was obtained from the Alabama Regional Medical Program enabling the program to hire an administrator.

This program continued to train junior and senior medical students on

electives from the University of Alabama in Birmingham until 1974, when a three-year residency in medicine was organized and accredited, with the help of Dr. James A. Pittman, Jr., Dean, University of Alabama in Birmingham Medical College. The funding for this largely voluntary program consisted of approximately \$25,000 per year grant from the Regional Medical Program and small contributions from the hospitals and County Society.

Expansion

In an attempt to expand the program, the Montgomery Area Community Health Sciences Institute was established in late 1973 as a consortium of educational agencies in central Alabama, including the University of Alabama in Birmingham, Auburn University at Montgomery, Montgomery Regional Medical Foundation, and the Montgomery V. A. Hospital.

The consortium was established by virtue of a Four Party Agreement for the purpose of expanding the undergraduate and post-graduate medical education efforts in the Montgomery area. Dr. S. Richardson Hill, then Vice President for Medical Affairs, UAB, and Dr. H. H. Funderburk, then Vice President for Auburn University at Montgomery, signed the agreement.

Auburn University at Montgomery, as the administrative institution, was able to obtain a \$100,000 per year state appropriation in late 1974 which enabled the program to obtain an office at Huntingdon College and hire

an administrative assistant and a secretary. During the same year, the Continuing Medical Education Program was begun and was accredited by the Medical Association of the State of Alabama for production of Category I programs, one of the first in the state.

From the above modest beginning, the present Four-Track Medical Education Program evolved: The Three Year Residency in Medicine which has now trained a total of 48 general internal medicine residents, some of who have settled in central Alabama; a Clinical Elective in Medicine which has rotated more than 75 students from UAB; a Pre-Med Program which has enabled approximately 65 college students applying to medical schools to obtain medical experience in the community, and thus helped channel these students from Huntingdon College, Alabama State University, and AUM, into various medical schools; and a very extensive Continuing Medical Education Program for physicians and allied health personnel.

The latter program has organized and approved numerous conferences, seminars, and courses in Montgomery, on a regular basis, with approximately 150 local physicians and allied health individuals attending these conferences weekly. Having these Category I—approved courses in Montgomery enables the practicing physician to obtain these credits locally without having to leave his practice, thus benefiting the community. Certificates of

Category 1 credit hours are mailed to each physician every six months.

Joint Program

During the last session of the Alabama State Legislature, an appropriation was obtained by the University of Alabama Medical College to help fund and direct the Montgomery Residency Program in Medicine so that it is now a joint Montgomery-UAB program.

At present there are 10 residents in training and it is anticipated that there will be 15 residents starting in July 1979. The present budget is still modest and consists of \$220,000 appropriated to the University of Alabama in Birmingham.

The above four-track program is directed by Dr. J. J. Kirschenfeld, Professor of Medicine and Associate Dean for Montgomery Affairs, University of Alabama in Birmingham, on a part-time basis, aided by part-time Directors of Medical Education at St. Margaret's Hospital, Baptist Medical Center, and the Montgomery V. A. Hospital.

The Residency program also organized and conducts an Outpatient Clinic in General Internal Medicine at Baptist Medical Center which is meeting twice weekly, extending medical service to patients without physicians and alleviating some of the strain from the emergency room system in Montgomery.

In addition to the undergraduate and post-graduate medical education aspects of the program, Medical Seminars for the public are held on a regular basis, and discussions have been held concerning development of Pre-Dental, Pharmacy, and Nursing student programs in conjunction with Auburn University at Montgomery.

The clinical faculty of the Montgomery consortium consists of approximately 50 board certified, practicing physicians, primarily in Internal Medicine, with a sprinkling of other disciplines, who are designated to be "on service" for specified periods of time in order to teach the residents.

Major Education Effort

From a modest beginning in 1968, this "Medical Education Program—Without Walls," and with minimal funding—has become a major education effort involving the major hospitals in the Montgomery area, many of the local physicians, and the local Universities in addition to the University of Alabama Medical College in Birmingham.

It has resulted in considerable stimulation to the practicing physicians who participate as teachers and also attend conferences, lectures and seminars. Numerous invited speakers from Universities all over the country; such as Emory, the University of South Alabama, the University of Alabama in Birmingham, Baylor University, Vanderbilt, and University of Texas Medical Center, conduct Grand Rounds in Medicine on a weekly basis.

A Distinguished Lectureship has been established in honor of the late Dr. Tinsley Harrison. Dr. Michael DeBakey presented this lecture last year and Dr. John Kirklin, Chairman of the Department of Surgery, UAB, is scheduled to present it this year.

A viable and innovative "Area Health Education Center" has thus been established in Montgomery, with very little funding but with the cooperative effort of the medical community, and has added a new dimension to Montgomery medicine, i.e., academic medicine. R

Tenuate® C
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychological dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy.* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children.* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecostasia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride). One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to

MERRELL-NATIONAL LABORATORIES

Division of Richardson-Merrell Inc.

Cincinnati, Ohio 45215, U.S.A.

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977

Merrell

**Whether overweight is a
complicating factor...
or just uncomplicated overweight.**

Tenuate[®] Dospan[®] ^{IV} **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.¹ And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."² Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.
And it's responsible medicine.**

Merrell



For prescribing information see opposite page.



The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions. However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).



Motrin[®] 400 mg TABLETS ibuprofen, Upjohn

The confidence that comes from experience—
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

The confidence that comes from experience—
one more reason to prescribe

Motrin[®] 400 mg TABLETS

ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. Aspirin used concomitantly may decrease Motrin blood levels. Coumarin Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea², epigastric pain², heartburn², diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness², headache, nervousness. **Dermatologic:** Rash² (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; ²3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

How Supplied

Motrin Tablets, 300 mg (white)

Bottles of 60

Bottles of 500

NDC 0009-0733-01

NDC 0009-0733-02

Motrin Tablets, 400 mg (orange)

Bottles of 60

Bottles of 500

Unit-dose package of 100

Unit of Use bottles of 120

NDC 0009-0750-01

NDC 0009-0750-02

NDC 0009-0750-06

NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3



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ALDOMET[®]
(METHYLDOPA/MSD)

TABLETS: 500 mg, 250 mg, and 125 mg

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Kalamazoo, Michigan 49001

Maternal and Child Health in Alabama

by Robert L. Goldenberg, M.D.
Director, Bureau of Maternal and Child Health.



Despite possession of the most advanced medical technology in the world, the health status of American children does not compare to that of children in other developed nations. In fact, 17 countries have lower infant mortality rates than does the United States. (Table I). In order to understand some of the problems in child health, it is appropriate to present an overview of maternal and child health in Alabama.

Alabama has not done well in the area of maternal and child health even when compared with the other states. Despite an overall improvement in maternal mortality, infant mortality, and fetal death rate, Alabama still is found at or near the bottom when the states are ranked.

Infant mortality is a crude but widely accepted method of evaluating child health in the United States. Perhaps it would be better to use the incidence of mental retardation, growth and development measurements, or other parameters to measure child health status, but these figures are not generally available on a state-wide basis nor are they collected in a consistent manner from year to year.

The distribution of infant mortality is clearly not the same throughout Alabama. Figure 1 is a map of the state divided into counties. The number within the county boundary represents the infant mortality per 1,000 live births in 1977. While the numbers change slightly from year to year, the counties with the highest infant mortality are generally found in a band beginning along the Mississippi border, south of Tuscaloosa and north of Mobile, running through Montgomery straight across to the Georgia border. The infant mortality in this area in recent years has been nearly twice that found in the northern part of the state.

Infant mortality is not only geographically maldistributed, but is unevenly distributed in other ways as well. Blacks generally have twice the infant mortality as whites, infants born to teenage mothers have a higher mortality than infants born to mothers in their twenties, and infants born to poor rural women have higher mortality rates than middle class urban babies.

While it is apparent that infants born to women who are poor, black, or rural have a disproportionately high mortality rate, not all the reasons for this disproportion are evident. Since the greatest proportion of infant deaths is related to prematurity and since poor, black and rural women have a greater propensity to have premature infants, a relationship between the prematurity associated with these factors and the high infant mortality rates in these groups is certainly present.

The availability and utilization of prenatal care have been related to a decrease in infant mortality. Figure 2 is a map of Alabama again divided into counties. The figures within the counties represent the percentage of pregnant women who had five or less prenatal visits. Since the average number of prenatal visits in the United States is 11 and since it is not unusual for middle and upper class women using private physicians to average between 11 and 15 prenatal visits during their pregnancy, five or less visits clearly represent inadequate prenatal care. Figure 2 demonstrates that



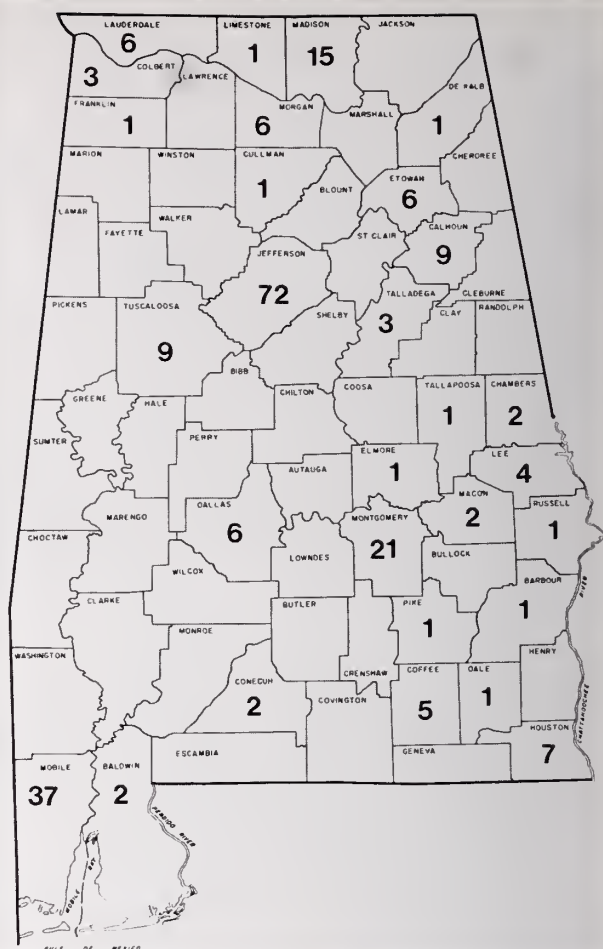
The percentage of women delivering babies who had 5 or less prenatal visits by county of residence in 1977. Data from Vital Statistics, State Department of Public Health.

in many of the counties with very high infant mortality rates there is a strong likelihood that a large percentage of women received less than optimal medical attention during the prenatal period.

Further evidence for lack of accessibility to medical care is derived from the fact that between 1,000 and 1,500 babies are born at home each year in Alabama. These births are usually attended by untrained "granny" midwives who to be licensed need \$10 and to be free from syphilis. It is indeed surprising that the infant mortality rates for this generally high risk group are not higher than they are. The very low rate of immunization in the pre-school children as well as the fact that, in Alabama, babies are still dying of pneumonia and diarrhea, all help to substantiate the belief that access into the medical care system for women

and children is less than optimal and contributes to the high infant mortality rate. Appropriate entrance into the medical care system requires both availability of services and a recognized need on the part of the consumer for these services. In Alabama, while there is clear evidence that in many counties availability of services is limited, there is also substantial evidence that utilization of available services by those most in need is less than optimal.

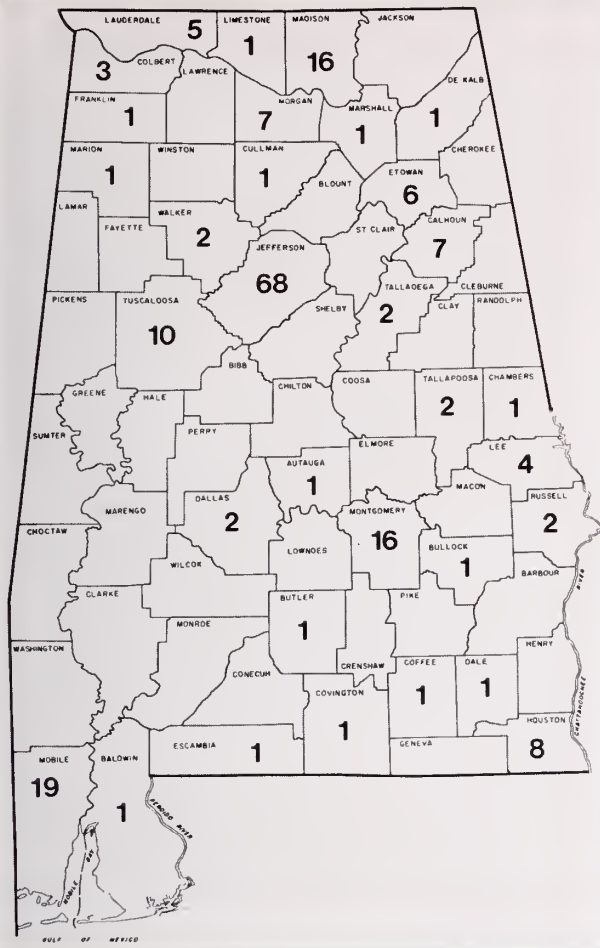
Alabama is a relatively poor state and poverty and poor pregnancy outcome are linked. Poverty is often associated with inadequate diet and the relationship between inadequate nutrition and poor pregnancy outcome is well established. Often, the lack of transportation discourages or prohibits many women from seeking prenatal



Number of obstetricians providing direct patient care by county in 1977. Unmarked counties have no practicing obstetricians. Data from State Health Planning and Development Agency.

care and pediatric care for their children. Our studies have shown that nearly 1/3 of the women and children in Alabama cannot afford to use private physicians for adequate preventive and acute health care. This may, in fact, partly explain the low number of prenatal visits in many of Alabama's counties as well as the high infant death rates from pneumonia and diarrhea.

While some preventive services, including prenatal care, are available in the health departments in many counties, problems of understaffing, lack of physician involvement, and inadequate facilities all tend to restrict utilization. Even when available, the lack of coordination between the preventive care received in the health departments and the acute care received in physicians' offices and hospital emergency rooms results in fragmentation of services and



Number of pediatricians providing direct patient care by county in 1977. Unmarked counties have no practicing pediatricians. Data from State Health Planning and Development Agency.

less than adequate health care for those women and children most in need of a coordinated effort.

A survey of resources available for pregnant women and children show a great maldistribution over the state. Figure 3 shows the distribution of obstetricians. Figure 4 shows the number and location of pediatricians. In many of the counties with the worst infant mortality, there is no specialty care available.

A recent resource survey indicated that most of the delivery services in the state are small. In fact, of the 127 hospitals which are recorded as delivering babies in 1977, only 18 did more than 1,000 deliveries and these were located in 10 counties. Thus, 57 counties in the state were served by hospitals doing less than 1,000 deliveries. Sixty-two hospitals delivered between 50 and 500 deliveries; and only 16

between 50 and 1,000. The typical county in Alabama, therefore, is served by a single hospital doing between 50 and 500 deliveries per year.

Obviously, the highly technical services available in the large medical centers are not often present in the smaller hospitals; and for this reason, at least in the area of perinatal medicine, a regionalized approach has come into practice. I should stress that the regionalized perinatal system developing in Alabama is not a centralized one, but rather a system of care in which the vast majority of women are cared for and delivered in a facility as near to home as possible. Only those women and/or babies who are likely to benefit from the very expensive and

often fragmented, highly technical approach offered at the regional perinatal centers are generally referred there.

A regionalized system of care involves communication, education and especially a commitment from all involved in perinatal care in a given community or region to effectively utilize the resources available to improve the outcome of pregnancy for all concerned. This is precisely what is happening in Alabama and, although developing slowly, is responsible for part of the recent decrease in infant mortality.

The next section describes some of the areas in maternal and child health in which there has been major interest in Alabama within the last year.

Country	1976
Sweden	8.7
Japan	9.3
Denmark	10.2
Netherlands	10.5
Norway	10.5
Finland	10.5
Switzerland	10.7
Singapore	11.6
France	12.6
Canada	13.5
Hong Kong	13.7
Australia	13.8
England and Wales	13.9
New Zealand	13.9
Belgium	14.0
German Democratic Republic	14.1
Ireland	14.6
United States	15.2
Spain	16.4
German Federal Republic	17.4
Austria	18.3
Italy	19.1
Israel	20.1
Czechoslovakia	20.8
Greece	22.6

Infant mortality per 1,000 live births in the lowest 25 countries with 2,000,000 or more population. Data from the United Nations.

Perinatal Intensive Care

Some of the most dramatic gains in child health have been made in the area of perinatal medicine. While it is difficult to determine the specific influence of any one test or procedure, the advent in the last 10 years of such things as the L/S ratio to determine fetal maturity; the oxytocin challenge test, and now a non-stress test; pre-delivery treatment with steroids to prevent respiratory distress syndrome; the more frequent use of cesarean section to prevent asphyxia and birth trauma, especially in premature infants; and the development of newborn intensive care units with their ability to provide respiratory support for the premature infant have all contributed to the decrease in fetal and early infant mortality.

Despite severe financial difficulties, the perinatal centers in Alabama (presently Huntsville, Birmingham, Montgomery, and Mobile) have contributed significantly to the decrease in the state's infant mortality. Recent studies from the perinatal center in Birmingham and elsewhere suggest that babies born there weighing between 500-1,000 grams (approximately one to two pounds) have survival rates of more than 50% and that serious long-term morbidity in this group will be less than 25%. This is a phenomenal change from 20 years ago when survival in this weight group was less than 5% and serious long-term morbidity found in survivors was between 75-90%.

In 1977 in Alabama, three percent of all mothers and/or infants were transferred to one of the perinatal centers. Fetal transport, i.e. transport prior to delivery, so the infant can be born at the perinatal center, has been shown to be valuable in improving infant mortality for premature and other high risk fetuses. The University of Alabama at Birmingham and the University of South Alabama have taken the lead in the area of prenatal maternal transport.

Figure 5 demonstrates a sharp rise in neonatal transport in Alabama over the last seven years. Together with the improved perinatal outcome seen in these centers, the increasing rate of transport can be expected to show an even greater reduction in fetal and infant mortality over the years to come.

In the last year, the perinatal centers working together with the Bureau of Maternal and Child Health, using a state appropriation, have begun an extensive effort to work with the smaller hospitals in their regions to improve labor, delivery and nursery care. A substantial amount of equipment has been distributed, and an extensive educational effort is now underway. The goal of this effort is twofold; first, that every infant to be born in a hospital which has the personnel and facilities to give it the type of care it needs; and second, whenever possible to have the mother and infant be cared for in a hospital as close to home as possible.

In many states the number of mothers or infants transferred to perinatal centers has leveled off at about 4-6%. We expect that the current efforts in Alabama will result in appropriate transfer of about this percentage of mothers and infants, allowing the vast majority to be cared for close to home, saving the expensive and highly technical care for those few mothers and infants who could most benefit from a stay at one of the perinatal centers.

Teenage Pregnancy

Teenage pregnancy and pregnancies of single women represent one of the major public health problems in Alabama. Approximately 25% of all pregnancies in Alabama are to teenagers and more than 20% of all infants are born to unmarried women. Both of these groups are statistically associated with an increase in infant mortality, low birth weights, fetal demise, child abuse, and a host of other related difficulties including maternal toxemia and mortality. In addition, teenagers who become pregnant are far more likely not to finish school, to end up on welfare unable to support themselves, and, if they do marry, to have significantly higher divorce rates than the rest of the population.

The recent large increase in teenage pregnancy in Alabama is due to many factors. Obviously, it has to do with many more teenagers having intercourse at an earlier time in their lives than in previous years. Recent studies show that in Alabama we can expect more than half the teenage girls to be sexually active prior to graduating from high school and that of these at

least 30% will become pregnant. This means that at least 15% of all girls who enter high school will become pregnant before they graduate.

None of the explanations available totally account for this phenomenal increase in teenage sexual activity. Clearly, however, all we need to do is listen to the records the teenagers buy, the television shows and movies they watch, and the books and magazines and newspapers they read to know that they are constantly receiving messages virtually encouraging them to participate in sexual activity. There is comparatively little emphasis concerning a responsible attitude toward sexual behavior. Nevertheless, during the last two years in Alabama there has been a tremendous interest in many counties in dealing with teenagers and their sexual behavior on a more realistic level. Even prior to the passage of a State Health Education Act, many schools are initiating health education curricula.

The Bureau of Maternal and Child Health has been barraged with requests for speakers to discuss sex, and contraceptive education. Newspapers throughout the state have been regularly reporting teenage pregnancy statistics and writing articles about the problem in their counties. We see this publicity as a positive phenomenon, because until there is general recognition that teenage pregnancy is a major problem in Alabama and until the time arrives that we are willing to discuss the problem openly and begin the educational programs that will enable teenagers to be aware of their responsibility, we can expect little change in the behavioral patterns that have led Alabama to have one of the highest teenage pregnancy rates in the United States.

Besides education, the other part of the preventing teenage pregnancies is the provision of contraceptive services for teenagers. According to Alabama law, sexually active women age 14 and above do not need parental consent for medical treatment. At present, there are no available statistics on the numbers of teenagers receiving contraceptive services from private physicians. In 1977, Health Department data show that in the family planning clinics 18,475 teenagers or 24% of all teenage girls in Alabama utilized the

continued on page 28



Dyazide[®]

Each capsule contains 50 mg. of Dyrenium[®] (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Makes Sense in Hypertension^{*}

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

*** Warning**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K⁺ frequently; both can cause K⁺ retention and elevated serum K⁺. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth, anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

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**When painful spasm
is the presenting
symptom...**



...in the functional bowel/irritable bowel syndrome*

Bentyl[®]

(dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity
with minimal anticholinergic side effects[†]

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

Bentyl[®]

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension; loss of taste; headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence; suppression of lactation, constipation; bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg capsule and syrup. *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. *Adults:* 1 tablet three or four times daily. Bentyl Injection. *Adults:* 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine[®] (bethanechol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

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Consent Forms

by Robert M. Moore, Jr., J.D.
Legal Counsel

Reprinted From Mayo Clinic Proceedings, 53: 393-396, 1978, June.

If written consent forms are to be used—their use normally is not mandatory—care should be taken that their use is proper and, hence, beneficial. To be of benefit to the physician, the consent forms must help him in meeting his duty to inform the patient or in protecting him from a patient's claim that his was not an informed consent (or both). Consent forms are of no benefit to the physician or the patient if they are worded poorly or put to poor use. Suggestions are provided to help the physician in considering his or her use of written consent forms.

With the present emphasis on consumerism, patients' rights in general, and the specific right of the patient to be informed about the nature and risks of any proposed treatment, physicians and other health-care professionals tend to assume that consent forms signed before surgery (and perhaps before other forms of treatment) are legally necessary, universally utilized, and a matter of simple routine. In fact, none of these assumptions is correct. The following statements are much more accurate:

Signed consent forms are not legally required for surgery or for most other types of treatment.

Signed consent forms are not regularly utilized by all physicians or institutions.

Improperly used, signed consent forms can do more harm than good, certainly to the physicians and perhaps even to the patient.

This article will highlight the major benefits and potential problems of common consent forms and offer suggestions on how such forms might best be used or whether they should be used at all.

continued on page 27

Enhancement of Palpation

by Samuel Eichold, M.D.

Associate Professor, University of South Alabama
College of Medicine, 2451 Fillingim Street, Mobile,
Alabama.

Palpation is defined as the act of feeling with the hands by the application of fingers with light pressure to the surface of the body for the purpose of determining the consistency of parts beneath.¹ The act of laying the hands upon the patient, affords the physician perception by his tactile sense, the temperature, the kinesthetic senses of position, and vibration.²

As a means of enhancing the diagnostic benefits of palpation, one should reduce the friction between the skin of the examining fingers and the skin surfaces of the patient. Such a reduction in resistance between the two surfaces may be afforded by a water soluble lubricant, a thin oil (such as mineral oil), or a solution of soap and water. With the reduction of resistance between the surfaces, there is enhancement of the elucidation of masses, induration, mobility of the subcutaneous parts, and perception of tenderness.

The thyroid gland, the breasts, and the testicles are areas in which I have observed significant improvement in the diagnostic results of palpation by this means.

References

1. Dorlan's Illustrated Medical Dictionary, 25th Edition, Saunders, Publishers.
2. Bedside Diagnostic Examination, DeGourn, published by McMillan Company.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate) ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

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When you're good people recognize you.

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Single-dose convenience
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Antiminth[®]
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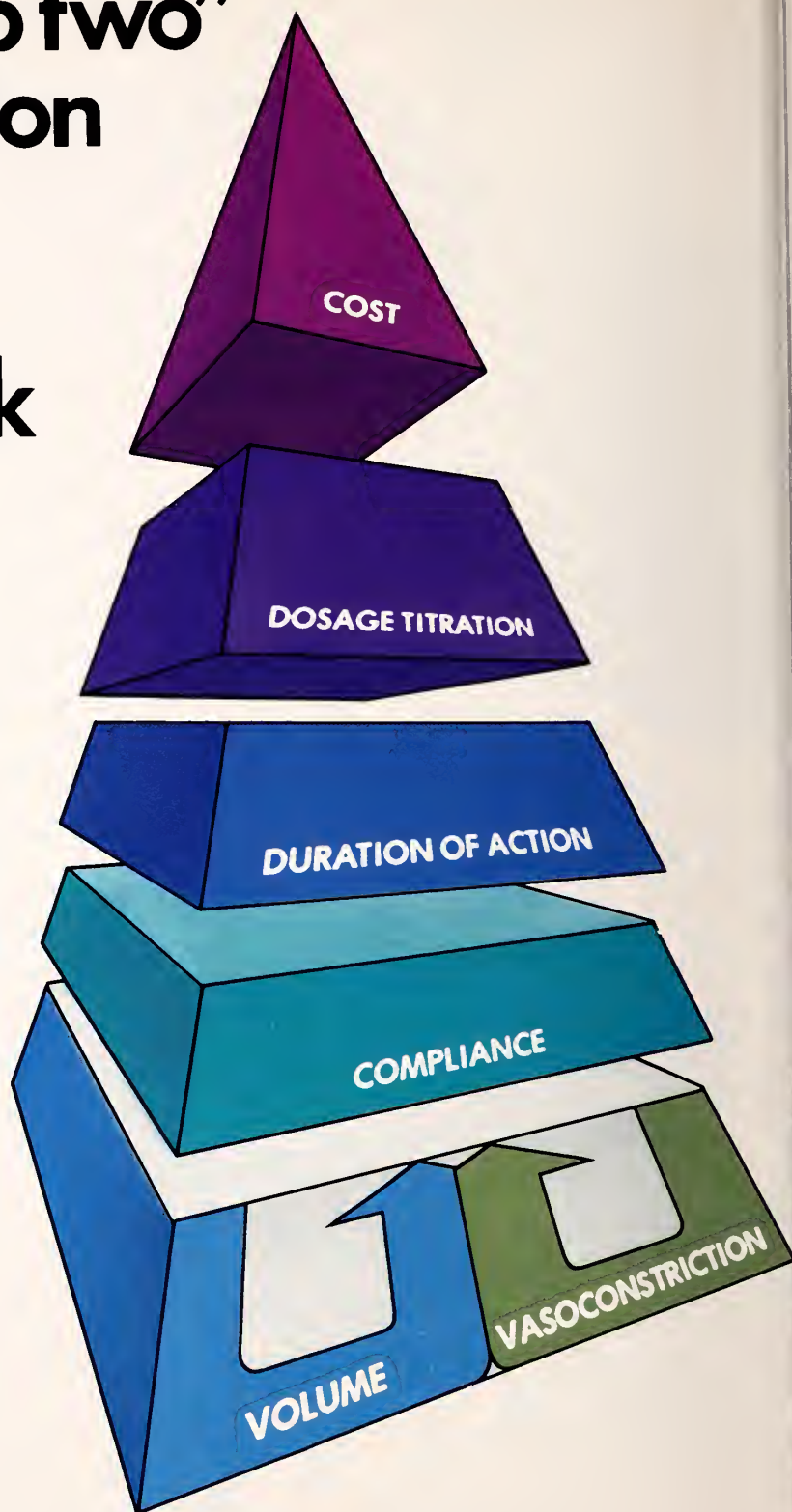


a drug of choice in
pinworm infections

Please see brief summary of prescribing information on facing page

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sound "step two"
hypertension
therapy
requires
every block**



Saluron[®]
(hydroflumethiazide 50 mg.)

Salutensin[®]
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Salutensin-Demi[™]
(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

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According to a recent study,¹ Salutensin[®] (hydroflumethiazide 50 mg./reserpine 0.125 mg.) was the most economical "step two" therapy... about $\frac{1}{3}$ the cost of a day's supply of thiazide + methyldopa or thiazide + propranolol.²

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Salutensin contains the recommended effective doses of both its components, requiring minimal titration.

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Salutensin contains Saluron (hydroflumethiazide), an intermediate-acting thiazide diuretic, which works over an 18-24 hour period, ideal for once-daily therapy.

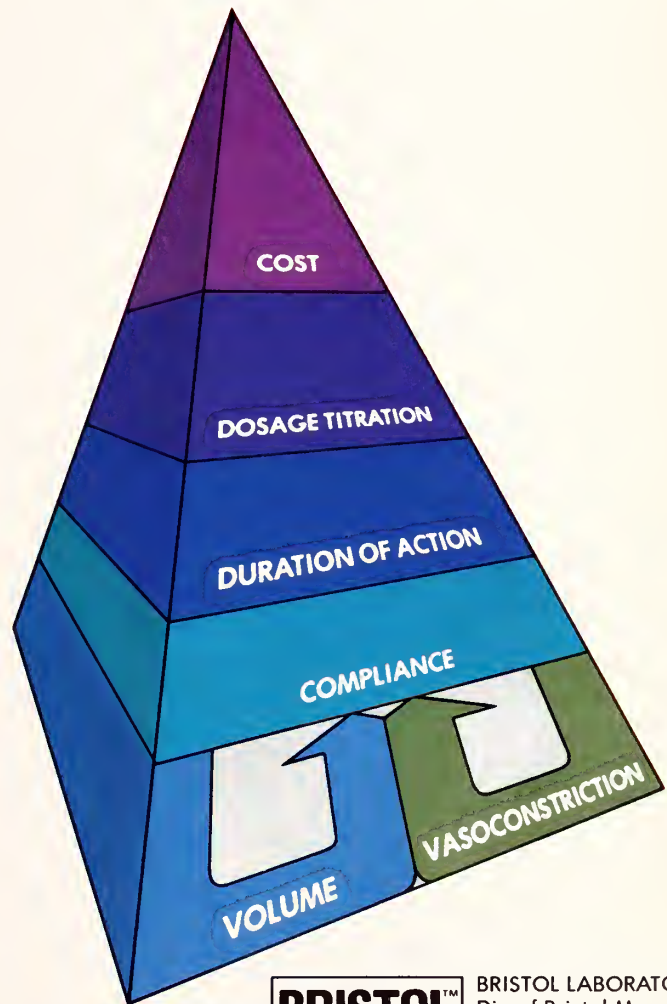
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The total daily dose can be given once a day. Compared with multiple-daily-dosage medications, the chance of a missed dose is greatly reduced.

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completing the
therapeutic pyramid**



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BRISTOL LABORATORIES
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References: 1. Finnerty, F.A. et al.: An Evaluation of Step 2 Regimens in Hypertension, data on file, Bristol Laboratories, 1977. 2. Red Book 1977.

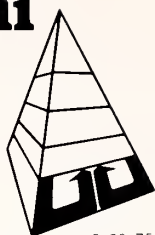
For a summary of prescribing information, please see following page.

Saluron[®]
(hydroflumethiazide 50 mg.)

Salutensin[®]
(hydroflumethiazide 50 mg./reserpine 0.125 mg.)

Salutensin-Demi[™]
(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

structured for the
long run in "step two"
hypertension



Saluron[®] (hydroflumethiazide)

5/20/75

For complete information consult Official Package Circular.

CONTRAINDICATIONS: Patients with anuria, oliguria, or hypersensitivity to this or other sulfonamide derived drugs.

WARNINGS: Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in pregnancy: Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing mothers: Thiazides cross the placental barrier and appear in cord blood and breast milk.

PRECAUTIONS: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine. The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS:

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

USUAL DOSE: The average adult diuretic dose is 25 to 200 mg. per day. The average adult antihypertensive dose is 50 to 100 mg. per day. Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

HOW SUPPLIED: Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

Salutensin[®] • Salutensin-Demi[™]

(12) 10/27/78

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in pregnancy: Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fetal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

ADVERSE REACTIONS: Hydroflumethiazide: Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostotic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE: 1 tablet b.i.d.

HOW SUPPLIED: Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

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The Backdrop Of Law

If the use of consent forms is not required by law (except for studies governed by Food and Drug Administration regulations), what is the backdrop of law which surrounds such forms? There are only two basic rules that the law (through court decisions) imposes on physicians.

First, the law imposes a duty on every physician to treat each patient in a reasonable and prudent manner, as measured by the standards of care of other reasonable and prudent physicians. If a physician's "negligence" (failure to meet the normal, professional standards of care) causes injury to his or her patient, that physician will be legally responsible to the patient for the damages caused by that injury.

The second rule of law is often referred to as the "doctrine of informed consent." With regard to any form of proposed treatment, the physician must inform the patient of the nature of and risks inherent in such treatment.

Not all known risks need be discussed, but the patient should be advised of the potential complications that are more common or severe. If the patient is not so informed, and one of the significant complications of the treatment occurs, the physician may be legally responsible for the damages caused by the complication, even if the physician was not negligent—that is, even if the physician's treatment was entirely reasonable and properly rendered.

It is apparent that the presence or absence of a patient consent form will have no bearing on the question of whether the treatment was negligently undertaken or performed. Any beneficial effect of consent forms relates to the second of these two duties—namely that involving informed consent.

Purposes Of Consent Forms

In this context of informed consent, one should carefully examine the specific purpose a patient consent form is intended to serve. Too

many forms are prepared and utilized simply for the sake of having a form.

A more critical review of the purposes of such forms and of the language and procedures necessary to achieve such purposes will help answer the most basic question of whether it is best to utilize consent forms and the procedures he utilizes to have the forms signed will have a beneficial rather than a detrimental effect.

To be of benefit, the consent form must help the physician in at least one of two ways. It may assist him in meeting his duty to inform the patient. Perhaps more importantly, it may also protect him from any later claim of his patient that his was not an informed consent. These two purposes are very closely related: a form that, on its face, does not very well inform the patient will only tend to show that the physician did not meet his duty.

Conversely, a form that does appropriately inform the patient will tend to provide the physician with a good defense against any later claim the patient may make.

Problems With Content Of Consent Forms

In any malpractice lawsuit in which informed consent is an issue, the consent form may be one piece of evidence for the jury to weigh in its attempt to decide whether the physician met his duty to inform the patient adequately.

Consider that in almost every case the patient will say that he does not recall being told of any risks associated with the treatment. He may or may not recall signing the consent form, but in any event he will say that he did not realize what he signed. If one were the juror (rather than the physician involved) consider how one would react to a form that (1) is so general that it does not discuss the particular procedure or possible complications from the particular procedure involved; (2) cannot be read completely, or understood, because of its length; (3) cannot be

understood because of its technical medical jargon; or (4) cannot be understood because of its technical legal jargon. Not only might the signing of such forms be given little credence by jurors, but the lack of understandable terms might even tend to prove that the patient was not properly informed.

These potential problems are likely to be compounded when the document appears intended primarily to protect the physician.

Some informed consent forms also attempt to release the physician from all liability, including that resulting from his own negligence—a provision that will not be upheld in the courts of very many, if any, states.

Similarly, although it may be legal in most states to require the patient to consent to some form of arbitration in the event a complication leads to a claim, combining such a provision with an explanation of risks and alternatives may result in a similar lessening of overall effectiveness of the form.

Problems With Use Of Consent Forms

Even when the content of a consent form is entirely appropriate, its effectiveness both as a communication medium and as a defense toll may be diminished by the physician's poor use of the form.

Perhaps the worst practice in this regard is the delegation by the physician to a nurse, receptionist, or other person of the responsibility of seeing that the patient signs the form. Such personnel are not physicians and they cannot begin to answer a patient's questions or meet the physician's duty to inform—as any competent plaintiff's attorney would quickly point out to a jury. In brief, the signing of the form cannot take the place of an adequate give-and-take discussion between the physician and the patient.

A second problem with the manner of use of consent forms probably arises more often in larger

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health department for contraceptive services. Our data further indicate that the average teenage girl who utilizes the health department for contraceptive services enters this system only after having been sexually active for some time. In fact, many initially come to the health department in order to be tested for pregnancy.

There is no evidence that the availability of contraceptive services induces women to begin sexual activity at an earlier age. The provision of family planning services to teenagers in Alabama likely prevented 10,000 pregnancies in 1977 and, in addition, provided a regular source of medical examination and screening for this predominately indigent group of young women.

Screening

Since 1966, Alabama has had a law requiring screening of every newborn baby for phenylketonuria (PKU). This program has located approximately three infants each year who, with proper treatment, have been saved from mental retardation. In the last year the State Laboratory (on the same sample of blood received for PKU evaluation) has performed testing for neonatal hypothyroidism. Since this condition appears once in 5,000 births, Alabama can expect to locate 10 to 12 hypothyroid infants each year by this screening procedure. Funding is now being sought to guarantee the continuation of this program.

Several counties in the state have begun a lead screening program and results to date have shown a surprisingly high incidence of infant and child lead intoxication. While at the present time limited funding precludes extension of this program to other counties, health care providers should at least be aware that lead intoxication can be a problem especially among children living in older buildings in both rural and urban areas in Alabama.

Immunizations

The Alabama law passed in 1973 requiring every child to be immunized prior to entering school has insured that virtually all children now entering school will be immunized. A recent federally initiated immunization drive has brought the total school population immunization rate in many

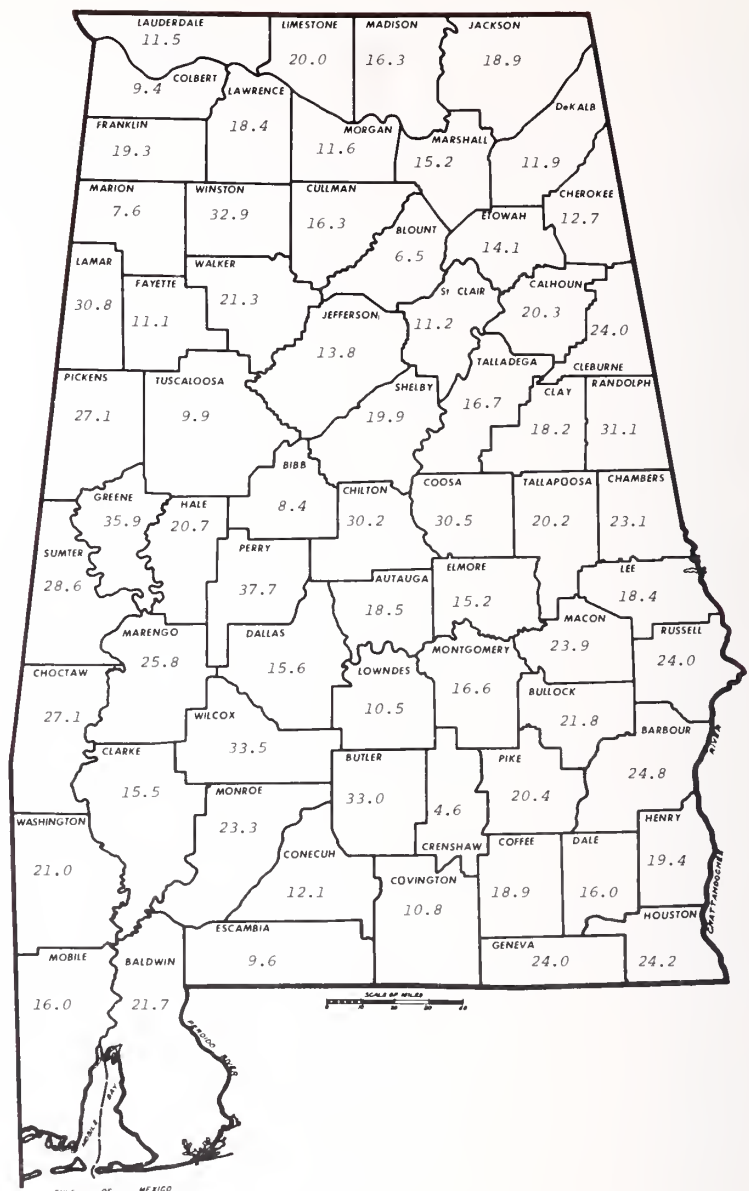
counties to over 90%. The major immunization problem in Alabama is that preschool children are often not immunized according to recommended schedules. Various surveys conducted in Alabama in the past year have indicated that only 50% to 60% of children under the age of five are up-to-date in their immunizations.

Since immunizations are easily available through private physicians as well as various clinics and the health department, there seems to be no reason for this problem. With the large federal immunization initiative the percentage of preschool infants immunized should

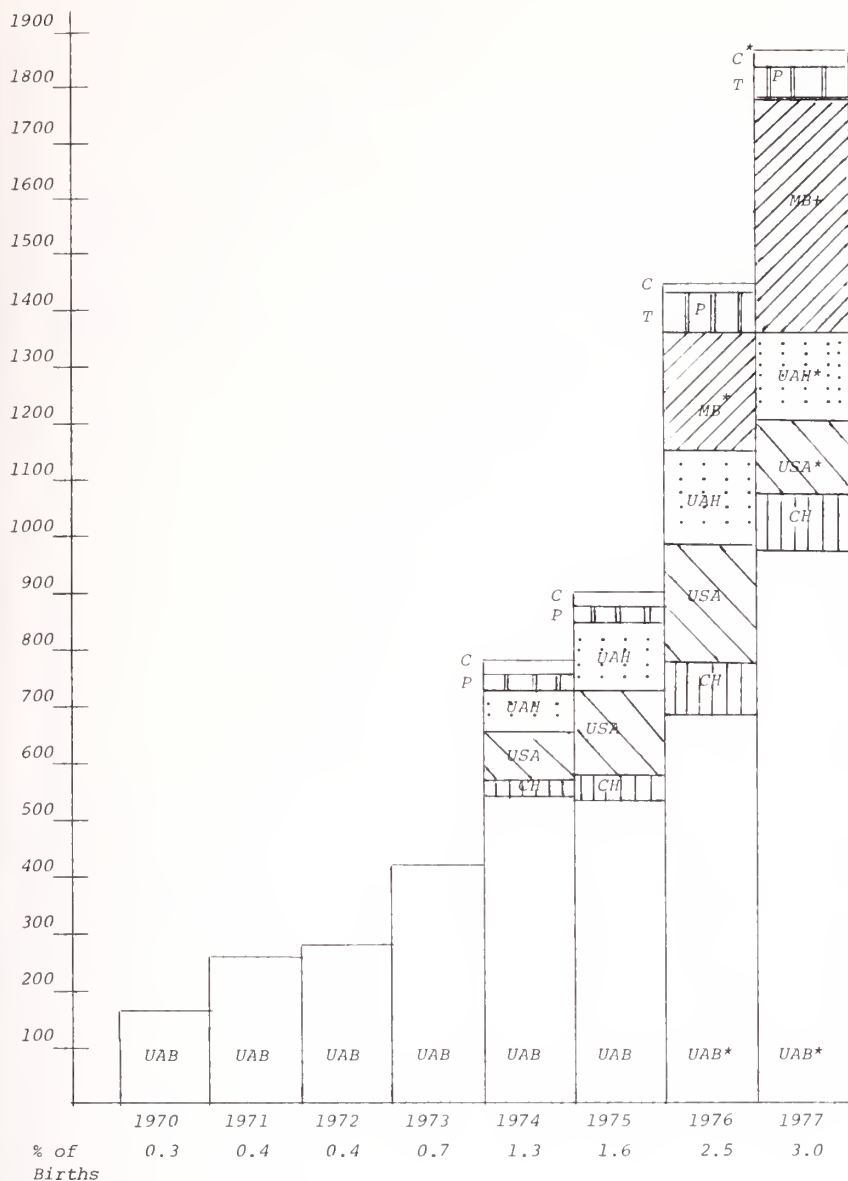
improve, but unless all of us involved in the provision of health care services for women and children constantly insure that the children we are seeing are up-to-date in their immunizations, we will continue to see the outbreaks of measles, whooping cough, rubella, etc., that have sporadically appeared in Alabama.

Genetics

The genetics programs in Alabama received two major boosts in 1978. The State Legislature appropriated \$200,000 each to the genetics programs at the University of Alabama in Birmingham and the University of



Infant mortality rates per one thousand live births by county of residence in 1977. Data from Vital Statistics, State Department of Public Health.



*Includes Fetal Referrals

Total fetal and neonatal referrals to perinatal Centers by years from 1970-77. UAB is University Hospital, Birmingham; CH is Children's Hospital, Birmingham; USA is Mobile General; UAH is Huntsville Hospital; MB is Montgomery Baptist Hospital; T is Druid City Hospital, Tuscaloosa; P is Pensacola, Florida; C is Columbus, Georgia. All data is derived from Clinical Information Systems, Department of Pediatrics, UAB.

South Alabama in Mobile to extend genetic services to all of Alabama citizens in need. In addition, the same two institutions in conjunction with Crippled Children's Services and the Bureau of Maternal and Child Health received a genetics grant from the Department of Health, Education and Welfare which will enable further provision of genetic services to those in need in Alabama. Outreach programs are now being developed as are major

educational efforts for health care providers.

School Health

An exciting school health program has been initiated by the Northwest Alabama Regional Health Department in conjunction with the school systems of Lauderdale, Colbert and Franklin Counties. Funded in part by the Appalachian Regional Commission, the Health Department and the Boards of Education, this program provides

health education and general physical screening for all children in each of two school grades each year. Children with problems such as obesity, scabies, visual abnormalities, etc., are either counseled as necessary or referred for appropriate treatment. A health department nurse follows up each child to insure that prescribed treatments are undertaken and that expected results are achieved. The program has been enthusiastically accepted by the education authorities, the county medical societies, the parents, as well as many other community groups.

Unfortunately, in many other counties in the state, due to limited funding, the school health program is either non-existent or merely has a nurse or physician "on call." A well-organized health and education program like that in Northwest Alabama has the potential to improve the long-term health of our children. We hope that additional funding will become available so that similar programs can be initiated in other counties in the years to come.

In summary, there are many problems in maternal and child health care in Alabama. Despite improvement in some areas, we generally are not catching up to the other states and, in fact, are falling further behind each year. Experience in other states indicates that at least half of the infant mortality is preventable by insuring access to care, appropriate referral and utilization of all available resources. The same is very likely true for Alabama.

The Bureau of Maternal and Child Health is actively working with a large number of private physicians and other agencies to increase access, referral and utilization of resources to help improve Alabama's maternal and child health statistics. We recently described our goals in the following way.

Our goal is to insure that all pregnancies are wanted, that pregnancy, labor, and delivery result in a healthy mother and a healthy infant and that through childhood and adolescence the child has every opportunity to reach his or her full potential. To achieve this, we need to have a health care system capable of doing the following things:

- Provide every child and adolescent with age-appropriate education about his or her body, health, and the health care system, stressing that responsible

continued on page 44

7% of the population may be harboring latent or dormant tuberculosis*

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Stead, W.W. and Bates, J., in Harrison's Principles of Medicine,
8th Edition, 1977, McGraw-Hill, p. 900.



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With a positive reaction, further diagnostic procedures must be considered. These may include x-ray of the chest, microbiologic examinations of sputa and other

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Adverse Reactions: Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons. Pain, pruritus and discomfort at the test site may be relieved by cold packs or by a topical glucocorticoid ointment or cream. Transient bleeding may be observed at a puncture site and is of no significance.

Reference: Diagnostic Standards and Classification of Tuberculosis. National Tuberculosis and Respiratory Disease Association, N. Y. 1969.

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Is This Trip Necessary?

LEONARD D. FENNINGER, M.D.

Group Vice President for Medical Education
American Medical Association

Last October, Dr. Margaret Klapper, Chairman of the MASA Council on Medical Education, and I had the opportunity to hear Dr. Fenninger give this presentation at a nationwide gathering of CME officials. We both felt his thoughts should be shared with the entire MASA membership, and he has graciously given us permission to do this.

Dr. Fenninger is the No. 1 man in education in the AMA; his ideas are lively, interesting and well thought out. His position is not that taken by MASA as far as mandatory CME is concerned, but it is a viewpoint we feel our members should understand.

Those who attend national CME meetings quickly perceive that this whole area is currently very volatile. There is much discussion pro and con about mandatory vs. voluntary CME; should CME be tied to relicensure or legislative mandates, etc. Many positions are possible, and the final scope and direction of CME is far from settled.

We feel our membership should understand these perspectives and this article is an effort in that direction.

George D. Oetting, Ed.D.
Director of Education

PRESENTATION—L. D. Fenninger, M.D., at Sixth Annual Conference on Continuing Medical Education, Chicago, Illinois, October 5, 1978.

The aims of education are to lead out, to explore, to expand knowledge, to enable people to gain understanding, judgment and wisdom. These are also the aims of the profession.

Physicians apply their knowledge, understanding and judgment to alleviate the burdens which their patients cannot bear alone. Where these are used for the regulation of professional practice, a fundamental philosophical conflict ensues.

Debates about the purposes and uses of continuing medical education stem from the diversion of the real aims of education to attempts on the part of the medical profession to show the public that the profession is responsible in serving the public interest and good.

Mandatory or obligatory continuing medical education, as a condition for the continuing practice of medicine and a basis for professional rights and privileges, has its origins in the efforts of a relatively small number of well-meaning physicians. They hoped to convince the public that abuses of these rights and privileges by a small minority of physicians would be controlled through mandatory continuing medical education. I believe that requiring continuing medical education participation by physicians is an inappropriate means of assuring integrity and conscience on the part of the physician and places the aims of education at serious risk.

Ancient Obligation

Practitioners of the profession have always had the obligation to maintain and enhance their knowledge and skills

as part of their responsibilities to those whom they serve. They also have the obligation to use their knowledge and judgment to the fullest in assisting persons who come to them for help, for physicians are, in the truest sense, teachers and servants to their patients.

I believe the social questions being asked of those practicing professions, such as medicine, law and education, are not answered by mandates requiring hours of continuing education. They relate, rather, to whether the practitioner will bring his best knowledge, skills and judgment to bear fully on the problems of those who seek help in a timely fashion and at a cost which can be borne by the patient, his family and the society as a whole.

Infrequently are questions raised by the public concerning the adequacy of knowledge and skills of physicians. Physicians themselves raise these questions about other physicians as part of their responsibility to the profession of medicine. Most of the complaints from the public of which I am aware originate in the failure of physicians to respond to a call for help, failure to give their undivided attention to patients, failure to explain fully to patients the nature and extent of the illness and what the consequences of symptoms and findings may be for the patient and those related to him.

There are also complaints about the cost of medical services, but these frequently arise from the failure of physicians to give the services which patients seek. In my view, none of these social and public questions can be dealt with or answered by licensure, relicensure, certification, recertification, examinations or compulsory continuing medical education.

I believe physicians, as individuals and through their many organizations,

have placed on themselves, because of their concerns and fears of external audits of practice and governmental or other social sanctions, a series of regulations and restrictions which inhibit the development of new knowledge and technology and their application to the purposes and process of education.

Origins

Comments made by members of the audience in response to presentations by previous speakers suggest that legislative proposals and laws arise *de novo* from the brows of legislators or from some collective, faceless body. Legislation arises from ideas and proposals of individuals. The health manpower legislation introduced by Senator Kennedy in 1975 which contained highly regulatory provisions for medical education in medical schools and residencies, for medical licensure and relicensure, and for the geographic and specialty distribution of physicians, was developed almost entirely from proposals made to Senator Kennedy or his staff by individual physicians or by some group representing physicians.

These restrictive and regulatory provisions were proposed by physicians, not by the Senator or his staff. Most state legislation relating to medical services and practice also has its origin in proposals from physicians and their associations. One may well ask why physicians and their associations recommend legislation or propose that laws be enacted to regulate physicians in ways which I believe adversely affect the care of the sick, the development of medical knowledge and the education of physicians.

Some physicians, apparently fearing governmental regulation, have recommended legislation as a solution to

problems created by a small percentage of physicians acting irresponsibly. Such legislation could place undue burdens on responsible physicians and distort medical education without actually dealing with the problems of irresponsibility. No evidence has been presented to support the premise that continuing medical education will make a physician behave responsibly toward patients and their problems.

Compulsory continuing medical education as a condition of the right to practice medicine has the possibility of making continuing medical education a travesty when it is used as a solution to the social problems of availability of medical services or the irresponsible and unethical behavior of physicians.

Continuing medical education is not a suitable means for dealing with such problems. Accreditation of institutions and organizations to offer medical education at all levels is threatened, as is specialty certification, when continuing medical education is used to restrict the practice of medicine, hospital privileges, membership in medical associations or eligibility for payment. Such restrictions should not regulate the knowledge and judgment of physicians in their responses to the needs of patients.

Such restriction and regulation are the antitheses of the aims of education. Special recognition of knowledge, abilities and skills through certification in a specialty, or through the good practice of physicians is being misused to restrict the responsible practice of medicine. The successful non-governmental voluntary systems for the recognition of quality in education and medical practice carried out as a responsibility of the medical profession are being confused with government licensure and the legal privileges and obligations it confers for the practice of medicine.

I believe only a small portion of the public has been convinced that mandatory continuing medical education is a suitable means of assuring safe, timely and effective medical care. I also believe a small minority of physicians are convinced of the usefulness of mandatory continuing medical education as a means of assuring responsible performance by physicians in the care of patients.

It seems to me that it is high time to re-examine the factors that have led to mandatory continuing medical education, to the current dogma of recertification and to also reassess the effects of such mandates on the quality of continuing medical education and on medical care. I believe the losses in education, and in the range of knowledge and judgment necessary to deal with individual problems of individual human beings by individual physicians, far exceed any gains that may have occurred through making continuing medical education compulsory.

Cook Book Medicine

The current course which medicine is taking toward greater regulation, greater restriction and "cook book medicine" can and should be reversed. Legislation can be repealed or amended when it serves no useful social functions or has unforeseen, adverse effects on society and individuals when evidence is developed and presented to the public and the legislators who represent the public.

The first question to be examined is whether mandatory or compulsory continuing medical education has any demonstrable beneficial effect on the health care of the public and on the provision of timely and effective medical care. The question should be examined by each professional association, and particularly by state medical associations, with respect to requirements for membership and with respect to licensure and reregistration of licenses to practice medicine.

If it is found that mandatory or compulsory continuing medical education cannot be demonstrated to serve the public and the profession in maintaining and improving medical knowledge and medical care, then I believe that such requirements should be rescinded because of their potentially adverse effects on education, accreditation and specialty certification and on the exercise of judgment on the part of physicians in providing medical care.

In my experience, the patient still remains the best of all clinical teachers. What the physician learns from patients and how he uses that knowledge in behalf of other patients does not lend itself to mandated or compulsory systems of continuing medical

education. Indeed, they may restrict such learning.

A second question to be examined is the effect of mandatory continuing medical education on the availability of medical services and the costs which must be borne eventually by the public.

Physicians As Public Servants

A third question is related to the social responsibilities of physicians as public servants and the ways in which fulfillment of these responsibilities may be improved through professional efforts in cooperation with the non-medically trained public.

The faculties and techniques of gathering data, analyzing them, drawing valid conclusions, acting on the evidence and modifying those actions as new or different evidence requires, so essential in clinical medicine, are applicable also to answering social questions and fulfilling the social responsibilities of physicians as human beings. This obligation is enhanced because as citizens and as persons with special skills, knowledge and privileges deemed essential by society, their input is vital.

Education of physicians, the public and their representatives in government in the social questions relating to medical care, practice, and education, is essential and worth the efforts it requires. It means that business and industrial leaders, leaders of unions, union memberships and other components of our society, must be included with physicians and by physicians in local communities to examine medical services and determine the means of safeguarding both the public, medicine and its practice. The profession should be very much concerned about the public good, which includes good medical science, education and practice.

The public good can be served only if both the public and the medical profession are engaged in developing suitable means of eliminating irresponsibility in physicians to the degree possible, given the limitations of humanity. It cannot be served by biases, prejudice and the application of mandates and compulsions in education to those social, moral and ethical questions which are not soluble through medical education. R

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Warnings: Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently

Precautions: Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e., clindamycin, erythromycin, tetracycline, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthal reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed

Adverse Reactions: Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.

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CONSENT FORMS

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group practices. Just as deviation from any usual practice may result in a presumption of negligence, so failure to obtain a patient's written consent in accord with a physician's usual practice may constitute evidence that the physician did not meet his duty to inform.

Suggested Content Of Consent Forms

With so many potential drawbacks to the use of consent forms, it should be evident that care must be taken to avoid such drawbacks and to make full use of the potential effectiveness of consent forms. The following are offered as suggestions in this context:

1. Guidelines about what risks and alternatives to include in the form could constitute the subject of an entire separate article. For purposes of this discussion, let it suffice to say that one should use common sense and include mention of risks of death or of serious bodily harm and risks of a less serious nature as their frequency increases.

2. Complex medical terminology should be avoided. One should use language that is helpful and understandable to the patient (and the jury).

3. A lawyer with medical-legal experience should review the forms, but legal jargon should be avoided for the same reasons that medical jargon should be avoided.

4. If it is considered desirable to include an agreement to arbitrate or some other type of "legal" stipulation, this should be done by separate document (again with the assistance of an attorney who is experienced in preparing such agreements). Attempting to combine a somewhat controversial legal agreement with an acknowledgement of informed consent may lessen the effectiveness of both.

Suggested Use Of Consent Forms

Perhaps even more important than the content of consent forms is the manner in which they are used by the physician. Intelligent use of forms, as outlined below, may even compensate for marginal content:

1. The form should not serve as a substitute for open discussion. Open discussion not only ensures that the requirements of the law are met but, more importantly, it increases the probability that the patient is truly informed, keeps his expectations at the most reasonable level possible, and instills in him the confidence and trust that constitute the foundation of a positive doctor-patient relationship.

2. If forms are used, they should be used in a consistent manner. For any given procedure, a consent form should either be used in every case or in no case.

3. The form should be signed in the physician's presence. The physician is thus able to verify personally that the risks and alternatives were carefully explained, that an ample opportunity was given for the patient to ask further questions, and that the patient (or next of kin if the patient was not able) did sign the form and did appear to understand the risks. The physician might sign the form himself as a witness.

4. It should be the surgeon performing the procedure or the physician instituting the treatment who has the key discussion and who sees to it that the form is signed. Involving physicians who do not have the primary responsibility invites contradictions and the transmittal of incorrect information.

5. The patient's close family should be encouraged to be present during these discussions with the patient and at the time the form is signed. They should give the form as witnesses. As a practical matter,

they often assist the patient in his decision about the procedure. Moreover, if a complication occurs (and obviously in the case of the patient's death), their recollections of the discussions and the relationship that was established between the physician and them may be critical.

6. Especially if there are concerns that the patient's comprehension of the discussion is not complete, the use of attention-grabbing techniques should be considered. For example, the physician might have the patient fill in the blank spaces on the form or have him read and initial each sentence or paragraph. These or similar techniques may help fulfill both purposes of the form—encouraging patient understanding and protecting the physician.

7. Finally, after every discussion about risks and alternatives, even if a consent form is used, the physician should make a note in his records about the discussion. Such added protection is especially important in the event of a poor result or an unhappy patient.

The note need not be lengthy but simply reflect that a discussion occurred and what the general content of the discussion was. The note might be more detailed to reflect any unusual aspects of the discussion, such as an unusually lengthy or detailed discussion.

When No Forms Are Used

If the physician decides not to utilize consent forms, it is even more important that a note be placed in his records to highlight the occurrence and content of the discussion(s) with the patient and his family. The note need not detail every particular risk that was mentioned to the patient. It should contain whatever language will best enable the physician to testify later about the content of the discussion.

Because it is obviously not possible for a physician to recall most

of these discussions later, it is important for each physician to develop a routine pattern of explanation of the procedures that he performs. The note in the record should be sufficient to indicate that a fairly typical discussion occurred and thus allow the physician to testify about the nature and content of his "usual" discussion. The note in the record need not be longer except to reflect unusual aspects of such discussions.

'Elective' Surgery

Although legal details of the "informed consent doctrine" are still evolving in many states (and not necessarily consistently from state to state), it appears likely that in most states there will emerge a rule of law which will certainly soften the impact on the physician of the informed consent doctrine.

That rule holds that in order for the patient to win the lawsuit, he must prove not only that the physician did not adequately discuss the risks of a given procedure but also that had the risks and alternatives been properly explained, the patient reasonably would have decided not to undergo the procedure and, thus, would not have suffered the complication.

In situations in which surgery was obviously necessary to avert death or serious harm, it may be very difficult for an injured patient to prove this latter point. On the other hand, when the procedure was clearly elective in nature (for example, many types of plastic or reconstructive surgery, joint replacement, and so on), the burden of proof will be much easier for the patient to meet.

The lesson should be obvious. In surgery of an elective nature, it is even more important that the physician have an appropriate discussion with the patient (and family), that the note summarizing such discussion be made and be made well, and that the forms be properly drafted and used.

To Use Forms Or Not To Use Forms

Is it best to use forms or not? Of those who have written about this question, most have recommended the use of consent forms in conjunction with surgical or other procedures in which the patient is placed at a significant degree of risk.

One suspects that most attorneys who defend medical malpractice lawsuits would also prefer to have a signed consent form to show to the injury whenever informed consent is an issue.

For many physicians, the use of written consent forms appear to be advantageous, if such forms are properly drafted and utilized. Proper drafting is a matter that a physician and his attorney should be able to achieve when the desire is present and there is appropriate cooperation. Proper utilization of the forms depends primarily on the understanding and motivation of each separate physician.

Differences in physician motivation to make proper use of the forms, especially in larger group practices, may well result in the lack of uniform practices. Problems inherent in a lack of uniformity may be one of the major reasons why some of the larger group practices (such as the Mayo Clinic) have not adopted the use of consent forms for most procedures. The larger size of some such practices produces other drawbacks to the use of written forms, including the difficulty of tailoring forms to a wide variety of surgical procedures, the problems of physical location and availability of forms in a large complex, and the question of accountability for the forms among the several physicians who may participate in the management of the patient.

With the increasing size of a practice, it becomes more difficult to monitor the use of written forms and to be sure that the signing of such forms does not become








a substitute for good communication between the physician and the patient.

If a physician is not willing or able to commit himself to forms and practices that ensure a beneficial effect of the use of the written forms, then the question should be raised as to whether the physician's and his or her patients' interests might best be served by not utilizing written consent forms.

Again, if this conclusion is reached, even more emphasis must be placed on comprehensive patient discussion and appropriate notes in the medical record. R



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CASE IN POINT

Family Practice Residents

There are some who argue that family practice residents have little place in the high risk nursery and the benefits they receive by experience there are minimal. Certain levels of care (Levels I, II, & III) have been described relative to the severity of the neonate's disease and guidelines have been established for referral.¹ Those with the greatest severity should be cared for in a high risk nursery.

I, myself, have vacillated as to the educational and lasting value of the resident's time spent in the high risk nursery. What is applicable and relevant in resident training is a matter of profound concern and argument among educators themselves.² Obviously the needs of the residents should be of paramount priority in any decision making that involves their training.

Nobody disagrees that within this country today, particularly in Alabama, we are afflicted with a serious maldistribution in health care, with an overabundance of many specialty care physicians in concentrated areas. It is the expressed commitment of our program to alleviate this paucity of primary care physicians in rural areas.

It behooves each of the traditional specialists to whom each resident is exposed during his training period to seriously ascertain the relevancy of the resident's clinical workload.

We are unable to create a "perfect world." At times, despite our attempts to achieve balance among different types of teaching patients, there is an overabundance of some types of patients as opposed to others. This is particularly true in pediatrics. One of the most serious problems in reducing infant mortality is the proper care of the neonatal infant, and the high risk nursery provides a plethora of clinical problems which serves as a valuable learning experience for the resident.

Emphasis is first placed on recognition of the problem. The resident works under the guidance of a staff pediatrician. The family practice resident will learn to handle many problems which later in life he may refer to a high risk nursery because of unavilable resources in his community. He will determine what problems he can competently handle within his community and what problems he needs to refer and the rapidity with which this decision must be made. Several cases from our nursery serve to illustrate this point.

Case 1:

A 5 lb. 5 oz. infant is born to a mother whose gestation is 40 weeks. The infant experiences no problems at delivery and is taken

In The High Risk Nursery

by David C. Hefelfinger, M.D.

Chairman, Department of Pediatrics, Associate Professor, College of Community Health Sciences, University of Alabama, Tuscaloosa, Alabama.

to the nursery. The resident is called 45 minutes after delivery that the infant is cyanotic. The infant's problem could involve (1) cardiovascular system, (2) respiratory system, (3) hematopoietic system or (4) a metabolic disorder.

The infant appears normal by examination except for cyanosis and bradypnea. A Dextrostix[®] is done and is less than 25 and a serum glucose is 17. An infusion of hypertonic glucose and continuous glucose fluids for 24 hours along with the early introduction of feedings results in no further problems for the newborn.

Symptomatic hypoglycemia represents one of the most common and important problems a family practitioner must be prepared to recognize. Not to recognize, or not to treat promptly can result in irreversible central nervous system changes leading to mental retardation.

Small for gestational age infants (SGA) commonly experience hypoglycemia which responds readily to intravenous glucose³, and the early introduction of formula feedings. This problem is usually non-recurrent. Symptomatic hypoglycemia represents one of the most common and important problems a family practitioner must be prepared to recognize.

Recognition involves thinking about it. All SGA infant should have post delivery hourly heelstick Dextrostix[®] checks regardless of symptoms since many are asymptomatic and still require treatment.

Case 2:

A 8 lb. 7 oz. infant is delivered following an unremarkable pregnancy, labor and delivery with the exception of heavy, thick meconium staining of the amniotic fluid and the newborn. The infant fails to breathe within the first minute, but has a good heart rate. The family practice resident attends the delivery and immediately bulb suctions the oropharynx and performs an endoscopic examination and suctions thick meconium through the vocal cords. The infant then gasps and is given oxygen, followed by more regular breathing. Within 1-2 more minutes, the infant cries and is breathing regularly with improved color following positive pressure oxygen.

Were this infant not dealt with aggressively and appropriately at delivery, he could have succumbed at delivery to asphyxia, developed meconium aspiration, possibly pneumothorax, or even death.

Followup on this infant reveals that no further problems were experienced within the nursery. A chest x-ray was clear and the infant was discharged on the third hospital day, doing quite well.

Residents within our program are instructed in the step-wise resuscitation of the newborn. During their residency, while on the pediatric rotation, they are expected to attend anticipated problematic deliveries and all C-sections. Senior residents and/or faculty provide back up.

Ample experience is gained in this area. Recent studies indicate serious problems result from situations when newborns were not suctioned by direct visualization when meconium staining and copious stained secretions were noted in the newborn's oropharynx.⁴

Case 3:

A 5 lb. 14 oz. infant was delivered by a local obstetrician and because the infant had a one minute Apgar of 3, positive pressure resuscitation was given by mouth through an endotracheal tube. The infant improved transiently. The infant was hurried to the nursery and noted to be cyanotic and tachypneic. A resident was called and the infant was noted to have decreased breath sounds over the left chest and the point of maximal impulse over the precordium was noted to be shifted far to the left.

A stat chest x-ray showed a pneumothorax (almost complete) involving the right lung. A Heimlich valve trocar was immediately introduced through the chest wall with complete evacuation of the pneumothorax. Immediately the infant's color turned pink and tachypnea ceased. Bubbling of the valve ceased after 30 minutes and at the end of 24 hours the valve was removed without sequelae. The infant was discharged on the sixth hospital day without problems.

Spontaneous pneumothorax following aggressive positive resuscitation can result in "blowing out" a lung and is not an uncommon complication. This is a pediatric emergency that demands immediate attention! The treatment is relatively easy, but recognition and prompt appropriate management is essential.

The insertion of a needle or trocar and tube (Heimlich valve) is an emergency procedure that frequently cannot wait for referral. Any physician caring for newborns must be pre-

pared to evacuate a pneumothorax, and working in a high risk nursery setting provides an opportunity for our residents to learn this life-saving procedure.

Case 4:

A term appearing infant spontaneously delivered in the front car seat 17 miles from the nearest community. The mother was a 19-year-old primigravida. A friend assisted in the ligation of the cord and the infant and mother were cared for at home by relatives. On the third morning following delivery the cord was noted to be oozing blood and their local doctor was called and the infant was referred to our high risk nursery. The infant's examination, with the exception of steady oozing of blood at the cord, was within normal limits.

The resident noted that the infant had never received prophylactic vitamin K. Coagulation studies were all within normal limits with the exception of the PT confirming hemorrhagic disease of the newborn. With the administration of vitamin K the bleeding ceased.

This is a simple and straightforward presentation but an invaluable teaching case. Residents learn best by seeing and doing as opposed to ritualistic chapter and verse reading on subjects that they cannot visualize. In Alabama in 1975, 2% of all midwife deliveries died, and 2% experienced some degree of hemorrhagic disease of the newborn secondary to not receiving vitamin K.⁵ The author submits that this resident having managed this case will always remember to give vitamin K to all infants who have not received it.

Case 5:

A 7 lb. 13 oz. caucasian male infant was born at an outlying community hospital. The infant was noted to be jaundiced within the first 24 hours. The mother's blood pressure was 0 positive. She had been referred to our hospital because of persistent vaginal bleeding following delivery and was in need of a transfusion and pelvic examination.

The referring physician stated that they were unable to obtain further blood studies on the infant and desired to transport the newborn because the infant was not feeding particularly well and was jaundiced. He felt the infant probably had physiologic jaundice. At the time of referral the infant was 34 hours old.

Examination in our nursery revealed a vigorous, healthy appearing infant who was in no acute distress, but who was markedly icteric. The blood type on the infant was A positive and the Coombs was positive. A reticulocyte count was 10.5 and a peripheral smear revealed occasional spherocytes. A total bilirubin was 13.1 (indirect 12.5; direct 0.8) and an IgM-18. The infant was begun on Bililites® and every 2 hour feedings.

Blood cultures were also obtained to rule out sepsis. The bilirubin did not rise higher with subsequent blood determination. The infant was noted to thrive and do quite well. Bililites® were discontinued at 48 hours and the infant was discharged 4 days after admission doing quite well.

This was an obvious case of A0 blood incompatibility. The referring physician recognized the need for referral, but was incorrect in his thinking that the problem was physiologic jaundice. Jaundice occurring in a newborn less than 24 hours of age is not physiologic. Also what should have been of paramount concern was an infant appearing sluggish. This should have made him suspicious of septicemia.

This was an excellent case of neonatal jaundice and necessitated the resident establish a systematic approach to evaluation and treatment. Several diagnoses had to be considered very rapidly, and sepsis had to be ruled out.

With a few simple tests: blood type-mother and newborn, direct Coombs, bilirubin (direct and indirect), and a smear the physician can usually make a definite diagnosis. A resident through this case and similar ones learns a systematic approach to jaundice. They also learn that to use Bililites® without a diagnosis can be dangerous and foolhardy.

Summary And Implications:

Having worked with family practice residents I have witnessed their apprehensions, frustrations, therapeutic triumphs, and a wide gamut of reactions. I am convinced with a good teaching experience, however, the resident can take with him to the rural community information which can result in innumerable benefits for his patients.

Frequently his mission will be recognition, stabilization and triage. Maybe all of us need to ask ourselves who is more important: he

who diagnoses neonatal meningitis or he who treats to completion the condition. Both are essential but resolution of the disease and improvement of the infant start with being able to recognize the problem. We are not all able to definitively handle every problem nor is this necessary.

I do feel that family practice residents who work with pediatricians who have had additional neonatal training can develop guidelines for:

1. An awareness of the problem that newborns can develop both suddenly and insidiously. With this, residents will determine what they can treat in their given locale and when consultation is needed. Referral will not necessarily be based on their level of expertise.

2. The technical skills of endotracheal intubation and resuscitation, radial artery sticks, umbilical arterial catheterization, placement of a Hemlich valve chest tube, and intravenous therapy.

3. Reasonable comprehension of neonatal physiology, e.g. oxygen transport, bilirubin metabolism, acid-base balance, replacement and maintenance I.V. fluids, and caloric nutritional needs.

4. The value of obtaining promptly such tests as: blood glucose, calcium, blood cultures, serum bilirubin, and lumbar puncture.

5. A systematic approach to handling specific problems, i.e., neonatal jaundice, blood loss, hypoglycemia, resuscitation, meconium aspiration, and pneumothorax.

I can think of no member of the health care team in any better position to assist in reducing our perinatal mortality than our new generation of residents. Their exposure to clinical medicine in contradistinction to the general practitioners of years ago provides them new dimensions that should only improve the health care for both infants and children.

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MATERNAL and CHILD HEALTH

continued from page 29

action especially in the areas of accident prevention, alcohol, drugs, sex, and contraception is his or her responsibility.

- Provide easy, complete, and nonpunitive family planning services for all sexually active people who desire it.

- Provide prenatal care which is given in a thorough and competent manner which, in addition, should include a mechanism by which hospital delivery by appropriate personnel is assured.

- Also, if at any time during the pregnancy, labor or delivery, complications are discovered, appropriate referral to either a high risk prenatal clinic or physician or hospital with adequate facilities should be available.

- The infant should have a single person or agency which directs his or her care, a single source which is responsible for immunizations, which maintains a medical record and insures referral to the wide variety of physicians, agencies and institutions which provide care for children in Alabama.

- And finally, after delivery the mother should be returned for follow up to the providers of family planning and normal maintenance care.

With general cooperation, I believe it is possible for our current medical system to provide the services to attain these goals. If we are able to accomplish this, our poor statistics, especially in the area of perinatal and infant mortality, should improve substantially. R

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Final classification of the less-than-effective indications requires further investigation.

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As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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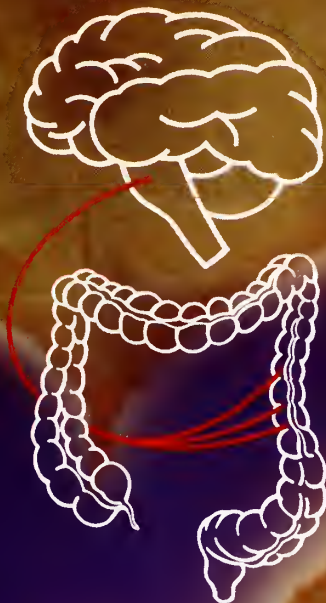
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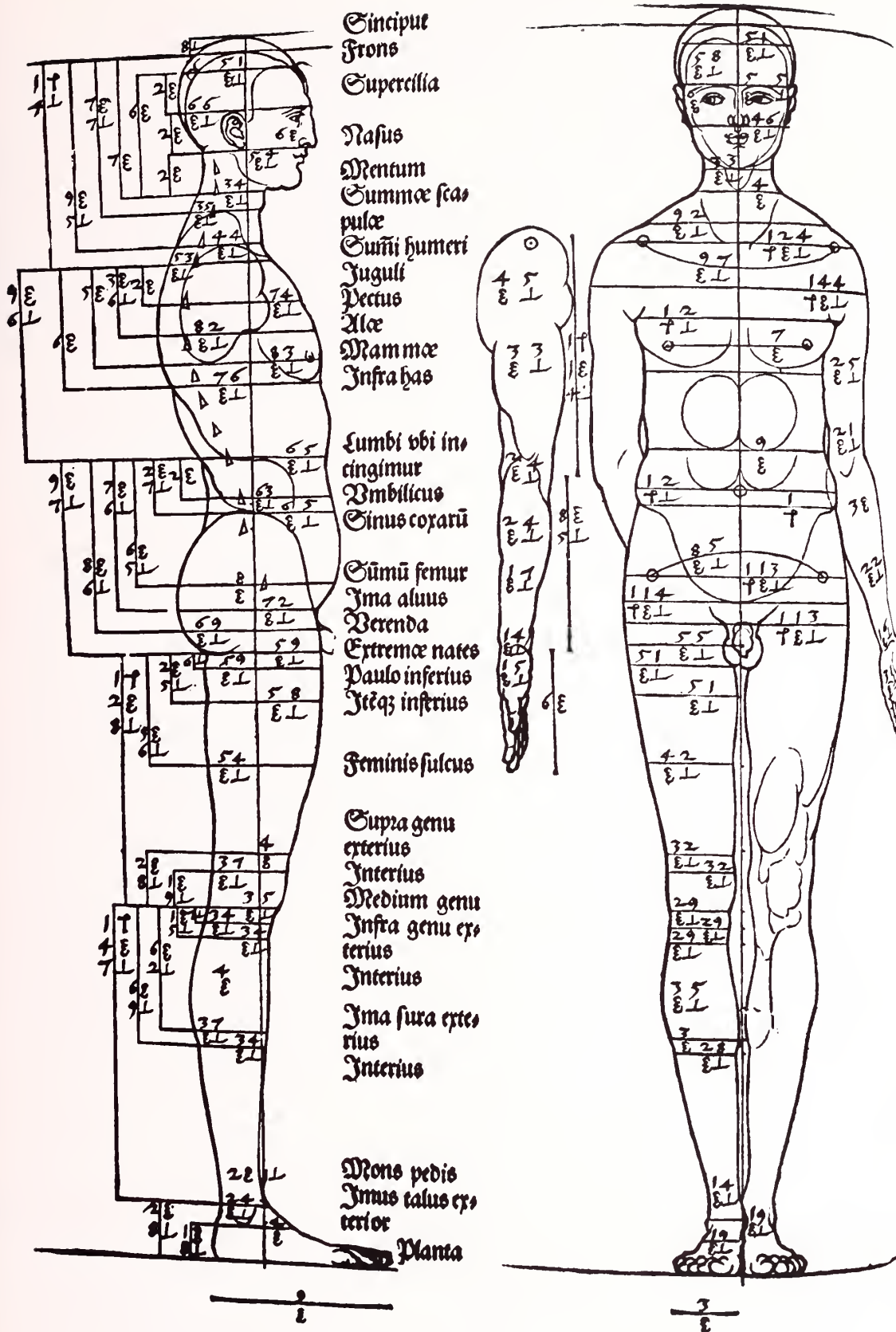


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One of the great artistic and intellectual forces of the early Renaissance was Albrecht Dürer, the German artist, engraver and theoretician. In addition to his creation of visions of terrifying fantasy, he evolved an elaborate system of body proportions. This is taken from one of his 16th Century works.—Reynolds Historical Library, Birmingham.



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A Note of Thanks DOCTOR

The heritage passed along by physician to physician since this country's inception has most always been exciting, fascinating and yet sobering.

From the earliest days, medicine has had its share of outstanding men, some who were to become founding fathers; in fact four of those men signed the Declaration of Independence. According to reliable sources, doctors were often active in the rebellion of the American colonists. They were statesmen in legislatures and Congress, they were officers in the line, and they were surgeons at battle sites and hospitals.¹ They were wise and courageous leaders fully dedicated then as well as later to the task that was before them.

It was also during these earlier turbulent years—nearing the end of the 18th century—that triumphant discoveries in preventive medicine were beginning to occur. With the first successful small pox vaccination in May, 1796, Edward Jenner changed the role of that virus from the conqueror to the conquered. Diphtheria disease recognition by Bretonneau in 1826, disease site identification of the germ by Klebs in 1883, and pertinent antitoxin work by Roux represented tremendous accomplishments.²

Later when properly used, vaccines developed for whooping cough (pertussis), lock jaw (tetanus) as well as those for typhoid fever, polio, measles and mumps would be found to be almost 100% effective. Successful treatment now available for tuberculosis, scarlet fever and typhoid fever are well known, and exceptional advancement in antiseptics made by Lister many years ago created a basis for immeasurable surgical progress.

Today in all fields of medicine one can scarcely believe and comprehend the mind boggling feats that have been developed and perfected during our more recent past. Especially for this reason we should be very much aware of the immense depth required of physicians who are called upon daily for emotional and legal as well as difficult medical decisions. And certainly we can expect to see their humane progress keep in step with the technical advancement that will be anticipated in the future.

So as we honor our physicians on Doctors' Day, March 30, let us recognize and appreciate the contributions made by those thousands of doctors who have given themselves unselfishly

for the care of people with all kinds of problems and illnesses.

Let us not forget to be appreciative also to those physicians and non physicians who have applied their thought and time to research, academic and technical accomplishments. And too, let us feel a large indebtedness to the ones who have so diligently dedicated their efforts, ideas and ideals for the control and prevention of disease.

As we honor those who in one way or another have been instrumental for developing better patient attention, may we also be grateful to those past and present, who have and will sacrifice to devote their thought and time for the common good. These physicians too will be contributing so that individuals in future years may receive excellent care similar to that which has so often been given in the past.



References

1. THREADS OF GREATNESS' A Bicentennial Tribute to Physician-Statesmen. American Medical Political Action Committee, compiled by.
2. Cecil, R. L., and Loeb, R. F.; A Textbook of MEDICINE. 30, 1959. Nelson, W. E., Vaughan, V. C., III, McKay, F. J.; Textbook of PEDIATRICS. 562, 1969.

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PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

ANESTHESIOLOGY: Age 30; India, 1973; American Board Eligible; seeking practice in specialty; private, solo or group. Available July 1979. LW-030279.

EMERGENCY MEDICINE: Age 42; Emory 1965; seeking practice in institutional or industrial medicine in the coastal/northern section of Alabama preferably in Mobile, Huntsville or Montgomery. Available immediately. LW-030379.

FAMILY PRACTICE: Age 31; University of Alabama, 1974; Board Eligible in Family Practice; seeking practice preferably in the southern part or on the coast. Available immediately. LW-02270.

FAMILY PRACTICE: Age 37; Ranga Raya Medical School, 1972; will be American Board Eligible in 1979; seeking practice in specialty preferably in Birmingham and suburban areas. Available July 1979. LW-02379.

FAMILY PRACTICE: Age 45; University of Saskatchewan, 1968; National Board Certified; American Board Certified; American Board Eligible; seeking practice in research, multi-specialty group or partnership. Available May 1979. LW-14776.

GENERAL PRACTICE/GENERAL SURGERY: Age 32; University of Buenos Aires; 1969; American Board Eligible; seeking practice in general practice, specialty, assistant or associate preferably in the coastal area with a population of 5,000 plus. Available April 1979. LW-030179.

GENERAL PRACTICE/OBSTETRICS & GYNECOLOGY: Age 59; Medical College of Alabama, 1954; American Board Eligible; seeking practice in multi-specialty group, single specialty group or partnership in a community of 25,000-99,999 population. Available. LW-14553.

GENERAL PRACTICE/EMERGENCY MEDICINE: Age 37; Cebu Institute of Medicine, 1968; seeking practice in partnership, solo, industrial or emergency room. Available July 1979. LW-14672.

OBSTETRICS & GYNECOLOGY: Age 43; Medical College of Georgia, 1975; seeking practice in specialty, solo or group preferably in the coastal area. Available January 1980. LW-030479.

OBSTETRICS & GYNECOLOGY: Age 30; Meharry Medical College, 1973; will be American Board Eligible in 1979; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1979. LW-13835.

OPHTHALMOLOGY: Age 28; Duke, 1976; seeking practice in Ophthalmology or Academic in a town of 75,000 plus population. Available January 1981. LW-02579.

PEDIATRICS/NEONATAL: Age 34; Howard University, 1972; American Board Certified; seeking practice in specialty preferably in the Birmingham area. Available July 1979. LW-030579.

PSYCHIATRY: Age 44; University of Toronto, 1959; American Board Certified; seeking practice in Psychiatry preferably in the southern section of Alabama. Available for practice in the near future. LW-02679.

ORTHOPEDIC SURGEON: Age 30; University of Tennessee, 1973; American Board Certified; seeking practice in specialty in a town with a population of 15,000 or greater. Available January 1980. LW-11478.

SURGEON/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single

specialty group or solo. Available July 1979. LW-12031.

GENERAL SURGERY: Age 32; Case Western Reserve University, 1974; seeking practice in solo or group practice. Available July 1, 1979. LW-02879.

GENERAL SURGERY: Age 34; Temple University; 1969; American Board Certified; seeking practice in a town with a population of more than 50,000. Available November 1979. LW-02979.

GENERAL SURGERY: Age 29; University of Mississippi; seeking practice in Alabama. LW-02779.

SURGERY: Age 45; Tufts University, 1957; seeking assistant or associate practice in a town with a population over 50,000. Available December 1979. LW-020179.

PHYSICIANS WANTED (Opportunities for Practice)

PRIMARY CARE PHYSICIAN—Wanted to serve as Medical Director of a Primary Care Group Practice. Will be a Montgomery, Alabama hospital employee with the opportunity to develop the ideal Primary Care Group Practice. Moving expenses, salary, other fringe benefits. PW-030179.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles north-west of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town

died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic are provided by residents of the family practice residency training program on a rotation basis. The clinic is in its third year of operation. The city is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.

Town of 1,300 population; trade less than 10,000; south central Alabama; one semi-retired physician in town; clinic available equipped for two physicians, commuter town; nearest hospitals 15 miles; nearest metro area 30 miles with 200,000 population; 5 churches, 4 schools. PW-09278.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.

STUDENT HEALTH PHYSICIAN: Needed at Auburn University, where eight full time physicians provide primary care to 18,000 students from a modern, well equipped health care facility. Regular hours, ample leisure time, competitive salary, and all University fringe benefits plus paid malpractice insurance. Both nine and twelve month appointments available. Requirements: Medical degree, Alabama license prior to appointment, plus an interest in the special problems of young adults and the ability to communicate easily with them. Contact: D. W. Oleson, M.D., Medical Director, Drake Student Health Center, Auburn University, Auburn, Alabama 36830. (205) 826-4416. An equal opportunity employer.

FAMILY PHYSICIAN OR GENERAL PRACTITIONER either of 2 offices in Mobile. Flexible arrangements in a small group. Family Medical, P. O. Box 160272, Mobile AL 36616.

RADIOLOGY—Seeking position as Locum Tenens in General diagnostic roentgenology. Alabama license and insurance. Neal S. Flowers, M.D., 209 Langham St., Monroeville, AL 36460.

ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, AL, Emergency Department, Physicians Medical Group, P.A., P. O. Box 9639, Marina del Rey, CA 90291, Phone (213) 822-1312.

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7445, evening hours 553-2198.

FOR RENT—Luxury Townhouse, Destin, Florida—Holiday Isle. Two bedroom, 2½ bath, gulfview, swimming pool and dock. Contact: Dr. Ralph L. Tieszen, 1529 N. 25th St., Birmingham, Ala. 35234 (205)967-3395.

Outstanding multi-hospital emergency group has excellent opportunities available in Greenville, Mississippi. Fly to Mississippi, work 6-16 shifts, spend the other 20 days in California. Fee-for-service. Malpractice insurance provided. No accounting, billing, or personnel problems. Contact: Garland Holloman, M.D., Delta Medical Center, 1400 E. Union Street, Greenville, Mississippi 38701 (601) 378-3783 or John Stein, 897 MacArthur Boulevard, San Leandro, California 94577 (415) 638-3979.

WANTED: Board Certified Internist to do insurance type office medical examinations in Alabama. Excellent remuneration. Apply: Dr. Escoffery, 16820 South West 274 Street, Miami, Florida 33031 (305) 247-7285.

FAMILY PRACTITIONER, GENERAL SURGEON, INTERNIST, OB/GYN, ORTHOPEDIC SURGEON—Needed for 3 year old 100—bed JCAH accredited full service hospital located in Northwest Alabama. Population of this amiable Alabama town is about 10,000 with a service area of 25,000. Reply to: Carol Nussbaum, Professional Relations, Humana Inc., P. O. Box 1438, Louisville, KY 40201. (502) 589-3790.

FP's, Ala. & Missouri, \$40,000 guarantee, moving, free rent, other: C.V. to Dr. R. E. Wiltsie, P. O. Box 57026, Birmingham, Ala. 35209.

Medical Director for Primary Care Group Practice to be employed by Montgomery AL., hospital. Experienced Primary Care Physician will have opportunity to develop ideal P. C. group practice. Moving expenses, other Fringes. Contact: Larry Dixon, Jackson Hospital Foundation, 1235 Forest Avenue, Montgomery, AL 36106 (205) 832-4000 ext. 4880

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may be the
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For recurrent attacks of urinary tract infection in women

Bactrim™ DS Double Strength Tablets

Each tablet contains 160 mg trimethoprim and 800 mg sulfamethoxazole.

Just one tablet b.i.d. for 10 to 14 days



- Action at urinary/vaginal/lower bowel sites helps eliminate reservoirs of infecting organisms
- Distinctive antibacterial action plus wide spectrum helps eradicate recurrent UTI
- Low incidence of bacterial resistance in community practice

- Convenient *b.i.d.* dosage provides day-and-night antibacterial control
- Contraindicated during pregnancy and the nursing period. During therapy, maintain adequate fluid intake; perform CBC's and urinalyses with microscopic examination.

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morgani*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasp. (5 ml)	½ tablet
40	18	2 teasp. (10 ml)	1 tablet
60	27	3 teasp. (15 ml)	1½ tablets
80	36	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).

Her next attack of cystitis may require

the Bactrim™

3-system counterattack



ROCHE

Bactrim has shown high clinical effectiveness in recurrent cystitis as a result of its wide spectrum and distinctive antimicrobial action in the urinary, vaginal and lower intestinal tracts.

The probability of recurrent urinary tract infection appears to be enhanced by the establishment of large numbers of *E. coli* or other urinary pathogens on the vaginal introitus. The trimethoprim component of

Bactrim diffuses into vaginal fluid in effective concentrations, thus combating migration of pathogens into the urethra.

Studies have shown that Bactrim acts against *Enterobacteriaceae* in the bowel without the emergence of resistant organisms. Thus, Bactrim reduces the risk of introital colonization by fecal uropathogens. It has no significant effect on other normal, necessary intestinal flora.

Bactrim fights uropathogens in the urinary tract/vaginal tract/lower intestinal tract

Please see reverse side for summary of product information.

JOURNAL

of the Medical Association of the State of Alabama

APRIL 1979



The Physician's Duty

Page 17

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COLLEGE OF PHYSICIANS
OF PHILADELPHIA
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PEDIATRIC INDICATIONS*
FOR BACTRIM CONTINUE
TO GROW...

*URINARY TRACT
INFECTIONS*

*PNEUMOCYSTIS
CARINII
PNEUMONITIS*

SHIGELLOSIS

*ACUTE OTITIS
MEDIA*

**Involving susceptible organisms.*

Please see Indications section in summary of product information on last page of this advertisement.

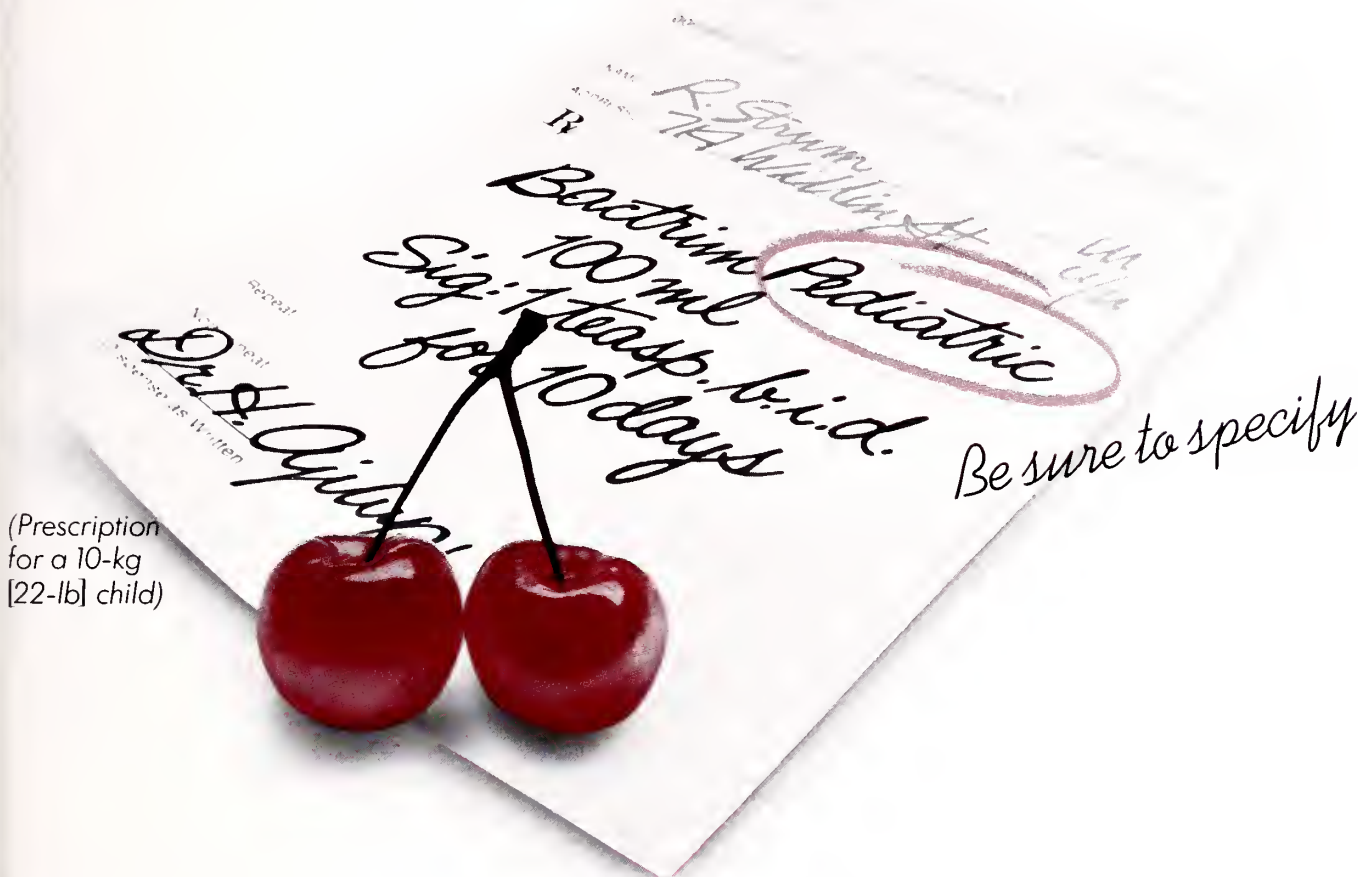
NOW... ROCHE INTRODUCES

NEW CHERRY FLAVOR **BACTRIMTM** **PEDIATRIC** **SUSPENSION**

Each teaspoonful (5 ml) contains
40 mg trimethoprim and 200 mg sulfamethoxazole.

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R. G. Gilman
100 ml
Bactrim Pediatric
Sig: 1 teasp. b.i.d.
for 10 days
Dr. H. G. Gilman
Be sure to specify

(Prescription
for a 10-kg
[22-lb] child)

ESPECIALLY FLAVORED FOR CHILDREN*

Also available: The original fruit-licorice flavor to be prescribed
as "Bactrim Suspension." The same active ingredient formulation—the difference is the flavor.

*Contraindicated in children under 2 months of age.

Please see summary of product information on following page.

BACTRIM

(trimethoprim and sulfamethoxazole)

ROCHE

Before prescribing, please consult complete product information, a summary of which follows:

Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. *Note:* The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

For acute otitis media in children due to susceptible strains of *Haemophilus influenzae* or *Streptococcus pneumoniae* when in physician's judgment it offers an advantage over other antimicrobials. Limited clinical information presently available on effectiveness of treatment of otitis media with Bactrim when infection is due to ampicillin-resistant *Haemophilus influenzae*. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age. Bactrim is not indicated for prophylactic or prolonged administration in otitis media at any age.

For enteritis due to susceptible strains of *Shigella flexneri* and *Shigella sonnei* when antibacterial therapy is indicated.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β -hemolytic streptococcal tonsillitis/pharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hemopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBCs are recommended. Therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function; possible folate deficiency; severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency hemolysis frequently dose-related may occur. During therapy maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. Blood dyscrasias: Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. Allergic reactions: Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. Gastrointestinal reactions: Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. CNS reactions: Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. Miscellaneous reactions: Drug fever, chills, toxic nephrosis with oliguria and anuria, periarthritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

URINARY TRACT INFECTIONS AND SHIGELLOSIIS IN ADULTS AND CHILDREN AND ACUTE OTITIS MEDIA IN CHILDREN

Adults: Usual adult dosage for urinary tract infections—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days. Use identical daily dosage for 5 days for shigellosis.

Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis. A guide follows.

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
22	10	1 teasp. (5 ml)	1/2 tablet
44	20	2 teasp. (10 ml)	1 tablet
66	30	3 teasp. (15 ml)	1 1/2 tablets
88	40	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1/2 the usual regimen
Below 15	Use not recommended

PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole; bottles of 100. Tel-E-Dose® packages of 100. Prescription Paks of 20 Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500. Tel-E-Dose® packages of 100. Prescription Paks of 40, available singly and in trays of 10. Pediatric Suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, cherry flavored—bottles of 16 oz (1 pint). Suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-flavor flavored—bottles of 16 oz (1 pint).

April, 1979 Meetings

- April 4-7 **Tennessee Medical Association**
Airport Milton Inn
Memphis, Tennessee
- April 19-21 **Alabama Medical Association**
Birmingham Hyatt House, Civic Center
Birmingham, Alabama
- April 19-22 **Missouri State Medical Association**
Chase-Park Plaza Hotel
St. Louis, Missouri
- April 20-22 **Georgia Medical Association**
De Soto Hilton
Savannah, Georgia
- April 21-22 **Iowa Medical Society**
Hyatt House
Des Moines, Iowa
- April 22-25 **Arkansas Medical Society**
Little Rock Convention Center
Little Rock, Arkansas
- April 25-29 **Arizona Medical Association**
Safari Hotel
Scottsdale, Arizona
- April 26-29 **South Carolina Medical Association**
Myrtle Beach Hilton
Myrtle Beach, South Carolina
- April 29-May 2 **Nebraska Medical Association**
Holiday Inn
Kearney, Nebraska

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ABOUT THE COVER

Aesculapius, the legendary Greek physician, became so skillful in healing, Zeus killed him, but at the urging of Apollo made him the god of medicine. The legend seems appropriate to the problems of modern physicians, as seen by Charles E. Herlihy, M.D., Birmingham psychiatrist, in his searching article, "Responsibilities of the Physician, To Himself, His Family, and His Patients," Page 17. Cover design from the bust of Aesculapius by Rhonda M. Montgomery, MASA.

Information For Authors Concerning Manuscripts

Manuscripts should be typewritten, double spaced on white paper 8½x11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

Copy Changes: When an author receives a galley proof back from MASA, he is expected to make corrections only. Copy changes, alterations on proof from the original manuscript, are expensive. Please try to say what you mean in the original.

Length of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct, drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

Reprints: Reprint orders should be returned at once. Prices for reprints, based on number of pages, will be furnished upon request. Communications should be addressed to *The Journal of The Medical Association of The State of Alabama*, P.O. Box 1900-C, Montgomery, Alabama 36104. Telephone 263-6441, Area Code 205. ●

FROM THE EXECUTIVE DIRECTOR

CME, Then And Now

In the old and even not-so-old days of medicine, the annual meeting was where doctors from various geographical regions, including the remote hinterlands, gathered to exchange the latest advances in their art and science. That was about all there was that could be called continuing medical education.

The coming of journals, like this one, did not supplant the medical meetings, but only supplemented them. The centerpiece of this year's annual session in Birmingham is, as always, the scientific program.

This year there will be a well organized morning session and four simultaneous afternoon sessions dedicated to various Alabama medical problems. But there is a difference this year because the mandatory CME requirement begins in July.

MASA's annual scientific sessions won accreditation after the 1975 inspection by the AMA Council on Medical Education.

You may note at the annual session a flurry of activity among CME officials. Reason: MASA's own CME program is being resurveyed by the Liaison Committee on Continuing Medical Education.

We hope to secure not only reaccreditation for our Annual Scientific Session, but also accreditation authority for our regional CME programs and other MASA activities. In addition, we could then co-sponsor as requested CME activities of the state specialty societies and other groups, and make more AMA category I programs available to the membership.

For several years, the Council on Medical Education has had its own booth among the exhibitors. Plan to drop by. If you are still confused about CME requirements, ask.

Additionally, the staff manning the booth will provide useful tips for your office staff in keeping track of your CME activities. A sample of MASA's Physician Recognition Award will be displayed, showing you the certificate you will get when you complete your requirements.

Brochures on coming regional CME programs will be available, as will video cassette tape presentations of CME material you may check out.

All of which is one more good reason to attend the annual session. There are many others, not the least of which is observing your association in action and renewing old friendships.

See you in Birmingham April 19-21.



S. Lon Conner

A Summing Up

Hiliary H. Henderson, Jr., M.D.



The past year has been a rewarding time for me as your President. Although I knew about the problems facing American medicine in general and our state association in particular, these were brought into sharper focus during the year.

I am more persuaded now than ever before that the only way that physicians can survive the challenges we face on many fronts is through pooling our energies and ideas in MASA and the AMA. Individually, we are weak. Collectively, we are strong.

Some programs that were initiated or continued during the year were these:

- Cost containment in cooperation with AMA;
- Impaired physician program, now a reality in Alabama;
- A second opinion program in elective surgery, in cooperation with Alabama Medical Review;
- A modified stance on national health insurance, supporting catastrophic coverage only (a position close to that adopted by the AMA in December);
- A new award to recognize acts of heroism in lifesaving by paramedics, firemen, policemen and ordinary citizens.

It is incumbent on me as your outgoing President to offer some comments on dangers I see on the horizon. Some of these are:

- The cost of medical care will continue to rise as the cost of supplies, services and expensive medical machines increase, and as our informed patients continue to demand the use of these services.
- The threat of second-level medical care, which could return the state to those dark days of the diploma mills unless the trend is successfully resisted.
- The Federal Trade Commission's new attacks on professionalism gravely concern physicians in this state and nationally. We are hoping for some remedial action in Congress, where there is already some growing resistance to the FTC grab for more power over industry and medicine.
- The Department of Health, Education and Welfare seems to be competing with the FTC in snaring us in guidelines paperwork under thinly veiled threats of disbursement extortion.
- HSAs, already active, may become more intrusive. I urge physicians to take an active role in their deliberations.
- National Health Insurance is usually regarded as the principal threat to medicine, but there are many others. We can be almost as effectively socialized by *regulations* as by *legislation*. The bureaucrats can take away independent medicine by inches as well as by yards and miles.

Support your Association. Give it the benefit of your experience and wisdom. Remember the wise old saying: It is better to light one little candle than curse the darkness.

We need each other. It is only through collective wisdom and action that medicine as we know it will survive.

In my opinion, your association is in competent hands and I believe Dr. Luther Hill, your incoming President, will make you a good leader in the coming year.

In closing, I want to thank the staff in Montgomery and the full membership of MASA for their cooperation, help and interest shown during my term as President.

Thank you for the privilege of serving as your President.

Hiliary H. Henderson Jr.

ROLE OF THE SPECIALTIES IN FAMILY PRACTICE TEACHING

A Family Practitioner's View

by CHARLES T. MOSS, JR., M.D.

Associate Professor of Family Medicine; Chairman of Family Practice Residency Program; College of Community Health Sciences; Selma/Dallas County Family Practice Residency Program.

ABSTRACT

The author points out some of the differences of opinion between family physicians and various specialists regarding the role of the specialist in Family Practice teaching. The need for specialty help and paramedical personnel in the multiple methods possible for teaching Family Practice residents is brought out. Attitudinal differences between a specialist teaching in his own specialty residency and one teaching in a Family Practice residency are noted.

Questions have been raised by specialists in various disciplines regarding the propriety of teaching outside of their own disciplines, especially in Family Practice programs. To answer these questions a broad understanding of the philosophy of Family Practice and of Medicine as a whole is needed.

Perhaps the definition of a Family Physician accepted by the American Academy of Family Physicians would bear repeating here. "The Family Physician is a physician who practices in the discipline of family medicine whose training and experience qualify him to practice in several fields

of medicine and surgery with particular emphasis on the family unit who: (a) serves the public as a physician of first contact and means of entry into the health care system, (b) evaluates his patients total health needs providing personal medical care within one or more fields of medicine and refers the patient when indicated to appropriate sources of care while preserving the continuity of his care, (c) assumes responsibility for his patients' comprehensive and continuing health care and acts as coordinator of his patients health services, and (d) accepts responsibility for his patients total health care including the use of consultants within the context of their environment including the community and the family or comparable social unit."

The game of definitions which has plagued our specialty since its inception continues to trouble us in relation to this particular problem. The boundaries of other specialties are obviously clearly defined -- or are they? Surely a Pediatrician is a pediatrician, but what is a Pediatric Neurologist, a Pediatric Surgeon, or a Pediatric Allergist? Are they Pediatricians or are they Neurologists, Surgeons, or Allergists?

continued on page 11



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Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K⁺ frequently; both can cause K⁺ retention and elevated serum K⁺. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions, nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

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Brief Summary

INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

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THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS

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CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis), paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste; headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg capsule and syrup. **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** 1/2 teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentyl Injection. **Adults:** 2 ml (20mg) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine[®] (bethanechol chloride USP) should be used.

Product Information as of October, 1978

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I refuse to accept an "all or none" theory of medical education based on the teaching of technical procedures and indicating that a physician not desiring to know everything is a discipline should know nothing of it at all. Other disciplines are already somewhat defined, and the patients seen in these disciplines screened, by the age of the patient, the sex, the organ system involved, various technical procedures performed upon the patient, or preliminary examinations and diagnoses performed by another physician, frequently a Family Physician.

This contrasts sharply with Family Practice in which we deal with unselected patients with undiagnosed problems. No other discipline has ever been asked to define its boundaries as sharply as Family Medicine is being asked to at this time.

10-20-30 IS INADEQUATE

My basic belief regarding Family Practice education is that the Family Practice resident should see as much and learn as much from every other discipline as possible. I do not feel that a check list of the "ten most common diseases, twenty most common procedures, or thirty most common diagnoses" is of much help.

The breadth of the scope of Family Practice is such that no one could possibly learn all of it in three or five or even seven or "X" years. We are interested in breadth more than depth, and I do not feel that any hour spent with any specialist in any discipline can be considered in any way wasted for a Family Practice resident's education. Education will be a lifetime, ongoing process, as it is for the other disciplines, and many of the problems which will be seen in the early years of practice will only be resolved after going to the text books for reference. This is surely true in all the other disciplines as well.

I feel that the personnel of a Family Practice department should be composed mainly of Board Certified physicians with extensive previous clinical practice. This is essential to create a desirable role for students and residents, as well as to provide the needed breadth of clinical judgement to handle problems arising in the Family Practice Center patients being seen by the residents.

But, specialists in all of the clinical disciplines are needed to help teach coordinated patient care.

Experts in Nutrition, Developmental Learning, Social Work, Community Medicine, and Public Health are needed as well. Our basic policy is to borrow heavily from various other disciplines. We know that we cannot compete with the other specialist in the depth of his knowledge of his particular field, or do we in any way try to, and we are not uncomfortable with this concept. Instead, we feel that our Family Practice students and residents should concentrate on doing what the other physicians are not always doing, that is, looking at the total person and family unit or substitute family as the case may be.

We lean heavily upon Behavioral Science as we know that many of the symptoms confronting the general family physician are in fact not based on organic problems. We want our residents to know a great deal about the probabilities of occurrence of various conditions and to recognize their limitations in handling unusual or complicated problems.

I would like to quote briefly from the "Guide for Residency Programs in Family Practice", prepared by the Family Practice Review Committee for Family Practice and approved by the American Academy of Family Physicians, and the Council on Medical Education of the American Medical Association, regarding the curriculum for teaching other clinical disciplines:

"Multiple methods exist for teaching other clinical disciplines and all may be used in residency training for Family Practice. The most common method is through assignment to both in-patient and out-patient clinical services during which time the residents have direct patient care responsibilities under appropriate supervision of qualified teacher practitioners. Departmental conferences, grand rounds, short preceptorships in private offices, ect., may enhance experiences of residents significantly.

Whatever method is applied, other specialty faculty should participate fully in Family Practice training and provide the same enthusiastic teaching for the Family Practice residents as they do their own residents."

A FORM OF IMMORTALITY

I can certainly understand why a Surgeon or an Internist or a Pediatrician or a Dermatologist or any specialist would like to have a resident full-time for an extended period in order to be able to impart to him as much as possible of the knowledge put together by the particular specialist, sometimes painfully and tediously, over a period of years of hard work.

In this manner we can achieve a form of immortality by reproducing ourselves in images if not in actual flesh and blood. However, we do not

attempt to make Obstetricians out of Family Practice residents on OB rotations, nor Dermatologists out of Family Practice residents on Dermatology rotations, nor Cardiologists, nor Surgeons, nor Orthopedists, nor Psychiatrists.

Rather, we wish as broad an exposure to all of these disciplines as possible to further extend our concept of breadth of knowledge of the total individual and his or her problems versus the concept of an indepth knowledge of a limited portion thereof.

I sincerely hope that each specialist teaching in a Family Practice program can feel that he has helped to produce a competent Family Physician well grounded in the basics of the particular specialty of the teacher, rather than be unhappy with the idea that he is not able in a limited period of time to produce a fellow physician as skilled in his own treasured specialty as is he himself. R



Librax®

Each capsule contains 5 mg
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Please consult complete prescribing information, a summary of which follows:

Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma, prostatic hypertrophy, benign bladder neck obstruction, hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants, and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses, but use caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.

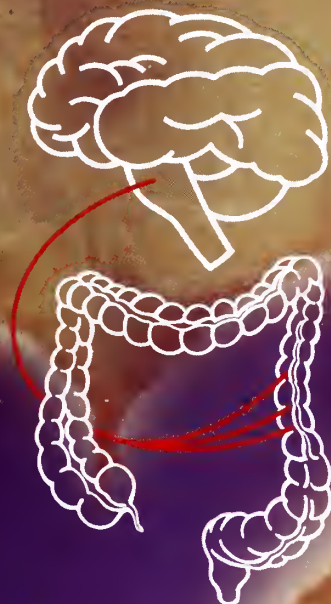
As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants, causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment, blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



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In treating irritable bowel syndrome*
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with

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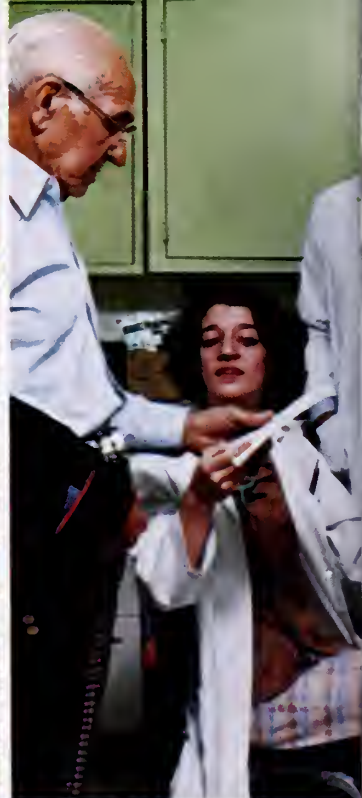
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5 mg chlordiazepoxide HCl
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antianxiety/antispasmodic/antimotility

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*Librax has been evaluated as possibly effective for this indication.
Please see brief summary of prescribing information on preceding page.



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Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

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However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).



Motrin[®] 400mg TABLETS

ibuprofen, Upjohn

The confidence that comes from experience—
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

Upjohn

The Upjohn Company, Kalamazoo, Michigan 49001

The confidence that comes from experience—
one more reason to prescribe

Motrin[®] 400 mg TABLETS

ibuprofen, Upjohn

Indications and Usage: Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Contraindications: Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

Warnings: Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

Drug interactions. Aspirin used concomitantly may decrease Motrin blood levels. Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

Pregnancy and nursing mothers: Motrin should not be taken during pregnancy or by nursing mothers.

Adverse Reactions

Incidence greater than 1%

Gastrointestinal: The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea*, epigastric pain*, heartburn*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness*, headache, nervousness. **Dermatologic:** Rash* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; *3% to 9%.

Incidence less than 1 in 100

Gastrointestinal: Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

Causal relationship unknown

Gastrointestinal: Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

Overdosage: In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

Dosage and Administration: Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

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Responsibility Of The Physician To Himself, His Family And His Patient

by Charles E. Herlihy, M.D.

Presented as talk at President's Prayer Breakfast, Annual Meeting of the Medical Association of The State of Alabama, April 21, 1978.

In the book of Sirach of the Old Testament, we read "Hold the physician in honor for he is essential to you; God it was who established his profession. From God the doctor has his wisdom, thus God's creative work continues without cease. He who is a sinner toward his Maker will be defiant toward his doctor."¹

Physicians have been accused of being Godlike and, little wonder; when one reflects upon this reference point with which we began this discussion. The topic today is to consider the responsibility of the physician to himself, his family and his patient. I will try to cover the points in that order if possible. I will try to point out that the physician must get his own house in order — take care of his family and devote what energies he can, safely, to his patients.

It is paradoxical that the physician, a person, ordinarily of very high intelligence, usually of good social, economic and cultural background, should have in recent years become

the focus or much of the iconoclasm prevalent in society since the 60s. One merely has to observe the increased number of malpractice claims. People are becoming more educated and do not see the physician as God-appointed or as Godlike and so some seem inclined, and it is not new, to knock the doctor from his pedestal to see if he really does hurt and cry. Is he human?

As one reads in the literature of the problems with which physicians consult psychiatrists or enter psychiatric hospitals, one is forced to admit that the physician has not been able to observe the maxim "Physician, heal thyself,"² There are some studies done which concern the incidence of suicide in physicians; for example, in a paper by Drs. Rose and Rosaw of San Francisco called "Physicians Who Kill Themselves"³, it is observed that a physician suicide is a tragic waste of human resource; and this paper says that physicians, as well as two other members of the health specialties, pharmacists and dentists, have a high rate of suicide compared to the general population. One can find various articles which refute this, but, from what I can determine, it does seem that

physicians commit suicide at one and a half to two times the rate of the general public.

It is interesting that physicians use "pills" ordinarily rather than fire arms while the other two health groups, pharmacists and dentists, prefer the use of fire arms, even though they have as much knowledge of the use of medicines as physicians. It is not clear, from the literature, why physicians are more suicide prone than other professionals but two factors seem to stand out: One is *age* and the other is *marital* status. Also, it is frequently said that the physician's problem is that he works so hard out of dedication to his profession that he wears himself out and turns to alcohol and drugs, etc.

Individual History

Studies do not support this as a valid observation. It seems, rather that the history of the individual, prior to college or medical school, is much more important. Factors such as position in the family, presence or absence of family stability, divorce between parents, the presence or absence in the physician of emotional problems such as difficulty in his interpersonal relationships all seem very important. One might say then, that, if one had good

screening techniques, one could simply screen out all of those individuals who seem to show some of these unfavorable points. That is not reasonable and not fair to individuals who come from backgrounds of that kind and who do not have trouble.

This latter is an interesting research area. It is suggested that there could be more attention paid, in medical schools, to counseling so young medical students would learn that they are vulnerable, just because they are in the medical profession, to problems associated with overwork, little time with family and sometimes with the inability to express feelings associated with constantly giving and not receiving much love, affection and understanding. Other evidences, beside those concerning suicide, are abuse of drugs and alcohol too in the medical profession. I realize the reasons are complex; I know it is too simplistic to say that Dr. X just works too hard, because there are many other physicians, Dr. Y and Dr. Z, who work long hours but who do not have the problem with thoughts of self-destruction, development of depressive illnesses or high use of alcohol and drugs.

With reference to the latter, the 1977-78 President of MASA, Dr. Rice, has had a great interest in assisting colleagues who may have had difficulty with chemical dependence. He organized a committee to establish a program to assist these physicians after a visit from a group of Georgia physicians who had set up a successful program.

We hope that this program will develop and that the approach will be one of kindness, understanding and non-coercion rather than to continue the "conspiracy of silence" which exists in medical societies and in hospital settings, and which allows a colleague to go on hurting himself and, perhaps, his patient because of his alcoholism or his drug problem only to come to the end of a long, tortuous road in the office of the Board of Medical Examiners where he is to be punished perhaps by temporary or permanent suspension of his license — a sad end for a man of intelligence, conscience and empathy after 20 or 25 years of work.

We hope we can interrupt that sad odyssey. In the coming months, we will hear more about the development

of this program and of the ways we can help some of our trouble colleagues.

Obvious Responsibility

The responsibility of the physician to himself seems obvious. He must, with our help or without it, become aware, early in his medical school career, that he may need some kind of counseling to enlighten him concerning his own internal conflicts and he needs to have some understanding of the possibilities of this interfering ultimately in his practice.

Let me now discuss the physician's responsibility to his family. Another area of physicians' difficulty is pointed out in studies of the wives and children of physicians who need outpatient or inpatient evaluation and treatment of emotional disorders. "The clinical impression of troubled physician marriages is supported by a review of hospitalized physicians' wives," according to a discussion in a paper of Miles, Krell and Lin⁴. "It is apparent that these women experience great distress and their marriages are quite troubled. The basic marital pattern seems to be that of a dependent, somewhat histrionic woman with an inordinate need for affection and nurturing marrying an emotionally detached man. The fact that he is a physician, seen by society as the ultimate in caring, may have much to do with the wife's choice of husband. The dramatic flair, which many of these women have, may be appealing to the rather inhibited, detached type of men the husbands in this group tended to be. The women also have a need to be looked after and this is complementary to some physicians' only way relating to others, namely to look after them."

Marrying Patients

Dr. George Vaillant stated that some physicians "have painful and unstable marriages because they had married not partners but patients."⁵ As the marriage progresses and the wife's needs are not met, she becomes more resentful. "Irritability and depression cause further withdrawal in her mate and his detachment results in an increase of her feelings of deprivation and resulting rage which causes frequent recourse to alcohol, drugs, suicidal gestures or attempts. The husband's reaction often is to immerse himself deeper in his work, often cited

as etiological but in the opinion of the authors, symptomatic. It is his way of remaining detached and also obtaining some positive reinforcement from others"⁵ such as, "look at that poor fellow, he works so hard and his wife is such a problem."

These unhappy marital situations are very complex and because of their obviously serious nature, satisfactory treatment approaches are often avoided. The reason is not clear but it is striking how often a physician will see the wife of a physician recognize her as deeply disturbed, with depression, excess drug or alcohol use and even reflect with her in an hour or two session upon what seems to be a very unhappy marriage.

Rarely does the physician (this includes psychiatrists), call in the physician husband and begin as soon as possible, conjoint marital work. More often, the wife is treated as an outpatient or admitted to the hospital and the physician husband is *rarely, rarely* interviewed. This is a conspiracy of silence of another kind apparently. Vaillant says that physicians involved in direct patient care were more likely than controls to have relatively poor marriages, to use drugs and alcohol heavily and to obtain psychotherapy.

He points out that, "although these difficulties are assumed to be occupational hazards of medicine, their presence or absence appear to be strongly associated with life adjustment before medical school; only the physicians with the least stable childhood and adolescent adjustments appeared vulnerable to these occupational hazards."⁵

Miles et al say "Medical practice itself is not the villain. Rather it may be that some physicians show an aspiration to be a doctor and this is part and parcel of the same personality traits which lead him to make an unsatisfactory marriage. Faculty members in medical school fail badly by not capitalizing on a potential personal growth experience inherent in medical training. This results in lack of enrichment for the psychologically healthy student and helps to insure that the vulnerable student is not getting the attention he requires. The husband's reluctance to be involved is symptomatic of the pathological marriage and should be dealt with directly and firmly."⁴

Once this is done forcefully and as if the psychiatrist knows what he is doing, the results are tremendously satisfying. Again, it seems simplistic to say that a physician should be home, should spend more time with his family and so on, but again in healthy, well-adjusted people, as we all know, it is not the quantity but the quality of the relating experience which is important. Again, it is obvious to say that there are many busy physicians such as there are many military people who are absent from their families a great deal and who are able, because of their excellent good health, emotionally speaking, to raise good families and to do that in spite of very little time spent with the family.

To refer again to the organization of a program to help the impaired physician; in a situation where the wife is very unhappy and the children appear to be suffering because of the presence of severe marital problems, such a wife could contact a hot line number indicating that there is a serious problem in the family and, that not only does a marital problem exist, but the wife has evidence that the physician is becoming severely drug or alcohol dependent. She can report this, in order to get help for her husband, and colleagues, who are called "advocates" or "confronters" would approach a physician, work with him for several hours if he will permit it and get him help.

Hectic, Chaotic

Krell and Miles from Vancouver, British Columbia, in a paper concerning marital therapy of couples in which the husband is a physician, point out that in all physicians of their sample, the pace of life was hectic, the manner of living chaotic, with office hours, appointment schedules, eating and sleeping patterns poorly established or absent; the commitment to work and its attendant responsibility frequently outweighed the commitment to family and personal growth.

Many of us agree with the suggestions to reintroduce *quality* into the life of physicians. All recommend keeping up with and contributing to medicine, enriching the life and mind through art, music and thoughts of life in terms of first principles, that is: what is true? What is good? What is valuable? No doubt what is true, good

and valuable include the physician's family. However, we take to heart Whittaker's and Miller's warning to therapists:

"Where the marital tie is weak and divorce threatens, intervention with one of the pair seems routinely to be disruptive. We are impressed that moving unilaterally in a marriage relationship taking one of the two as a patient and referring or ignoring the mate is often a tactical blunder."⁶

It is necessary to caution therapists not to despair because the physician is rigid, obsessive, and may seem, at first, to respond poorly to individual psychotherapy. We must remember the individual has managed to maintain a marriage relationship for a number of years and that, within this relationship, there is often love and there are hopes which far exceed the individual capacities of a marital partners.

With regard to the patient's responsibility to his patients, very little can be said that has not been said before, and this has been one of the problems. For example, Dr. William Haggard in the *Journal of the American Medical Association*, 1913, said, "The obligation of the profession in medicine as well as in surgery is a very sacred one. It must be our constant endeavor by the unwritten laws of custom, by the force of speech, by ethical regulation in the profession, by educational betterment, by statutory enactment of safeguards the traditions and ideals of the profession and fulfill our highest obligation in caring for the lives, the health and the happiness of the people of this country."

Coordinated Responsibility

There is no question in our minds that we must take care of our patients, but considering the areas that we have just discussed, the responsibilities of the physician to himself and to his family must be coordinated in a very healthy way. He has a responsibility to his patient. The personality of the physician, of course, again, has much to do with whether or not he devotes himself completely and totally to his patient to the exclusion of himself and his family. The physician who thinks that he has been appointed by God to cure all ills will be unable to say "no" for fear that he will be less than God; he will not be loved by his patient. The obsessive-compulsive pattern of

many physicians of course works hand in glove with this misconception of self and allows the physician to be taken over, consumed and destroyed by patients who are emitting cries for help.

The physician, further, has a duty to demanding patients to let them know that he is like them, that he needs time for himself and time for his family and that he should refuse to take on new patients if it really appears that he cannot take care of them. Psychiatrists have argued for a long time that office hours could be much better structured.

As said above, it is quite evident that the physician, in spite of his intelligence and his tendency to be obsessive-compulsive, lacks a certain amount of order to his life. This is reflected in packed offices, people coming without appointments, people calling at all hours of the day and night and the like. There is no question that many of the younger physicians have learned more about this than the older ones and they are beginning to take a stand. This has caused division between the conservatives, the traditionalists and the contemporary physicians who feel that they have a right to their lives, that it is important for them to function as human beings as fathers and husbands. This has made them appear to be self-serving and interested in the more mundane things of life rather than to be inspired by the lofty biblical direction quoted at the beginning of this paper.

It has always been true from one generation to the other that they, the newer generation, are not as devoted and caring as we, the older generation, but they really are; they have the same amount of compassion, of empathy and the need to take care of people; they just present it in a different way. The duty to his patient demands that the physician re-evaluate himself frequently and his practice and decide exactly how much he can do. It may mean that physicians will have to be satisfied with much less in the way of financial earning but, content to know that it is well made up in terms of better living, better caring and better growth and development for all concerned.

Toward A Blend

In summary, let me say that I have tried to say a word or two about the

responsibility of the physician to himself, his family and his patient. There is no question that there must be a wonderful blend and coordination of all of these areas, that the physician, a dedicated person usually, can be helped, in medical school, in terms of his own emotional problems which may stem from unhappy child relationships, or a tendency to be depressed.

If this can be done, the physician, at graduation, will be a much more intact person psychologically, able to make a very healthy decision about the kind of medicine he wishes to practice, about how many patients he may be able to serve comfortably, and about how much time he can give to helping his wife to develop and grow in her own way so that she will become a much happier wife and mother and raise children who will not be turned off by the thought of entering the

practice of medicine or on the other hand, turned on too much and pursue, almost blindly, a field because they have been pushed and motivated by forces they have not been able to control.

As far as our patients are concerned, we want to serve; we have to ask for guidance. I will close with a prayer which I know as *The Physician's Prayer*. This prayer, I think, sums up the kind of attitudes we should have to help us to be able to serve effectively, comfortably, and, I hope, with the development of some things we have thought about today:

"Dear Lord, thou great Physician, I kneel before Thee, since every good and perfect gift must come from You, I pray: give skill to my hand, clear vision to my mind, kindness and sympathy to my heart. Give me singleness of purpose, strength to lift at least

a part of the burden of my suffering fellow men, and a true realization of the privilege that is mine. Take from my heart all guile and worldliness that, with the simple faith of a child, I may rely upon you. Amen."

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DESCRIPTION: Pronestyl (Procainamide Hydrochloride) is the amide analogue of procaine hydrochloride and is available for oral administration as veneer-coated tablets providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride.

CONTRAINDICATIONS: In patients with myasthenia gravis and where a hypersensitivity to procainamide exists; bear in mind cross sensitivity to procaine and related drugs. Should not be given to patients with complete atrioventricular heart block. Contraindicated in cases of second degree and third degree A-V block unless an electrical pacemaker is operative.

PRECAUTIONS: Evidence of untoward myocardial responses should be carefully watched for in all patients. In the presence of myocardial damage with atrial fibrillation or flutter, the ventricular rate may increase suddenly as the atrial rate is slowed; adequate digitalization reduces but does not abolish this danger. Ventricular tachysystole is particularly hazardous if myocardial damage exists.

The dislodgment of mural thrombi producing an embolic episode may occur in correcting atrial fibrillation due to the forceful contractions of the atrium.

Extreme caution is required in attempting to adjust the heart rate when ventricular tachycardia has occurred during an occlusive coronary episode or where the use of procainamide may result in additional depression of conduction and ventricular asystole or fibrillation as in second degree and third degree A-V block, bundle branch block, or severe digitalis intoxication.

Bear in mind when treating ventricular arrhythmias in patients with severe organic heart disease and ventricular tachycardia that complete heart block, which may be difficult to diagnose, may be present. Since asystole may result if the ventricular rate is significantly slowed without attainment of regular atrioventricular conduction, procainamide should be stopped and the patient re-evaluated.

In the presence of both liver and kidney damage, normal dosage may produce symptoms of over-dosage—principally ventricular tachycardia and severe hypotension.

A syndrome resembling lupus erythematosus has been reported with oral maintenance procainamide therapy. Common symptoms are polyarthralgia, arthritis and pleuritic pain. Fever, myalgia, skin lesions, pleural effusion and pericarditis may also occur. Rare cases of thrombocytopenia or Coombs-positive hemolytic anemia, possibly related to this syndrome, have been

reported. Measure anti-nuclear antibody titers at regular intervals in patients on procainamide for extended periods of time or in whom symptoms suggestive of lupus-like reaction appear; in event of rising titer (anti-nuclear antibody) or clinical symptoms of LE, assess the benefit/risk ratio related to continued procainamide therapy (see boxed Warning). Steroid therapy may be effective if discontinuation of procainamide does not cause remission of symptoms. If the syndrome develops in a patient with recurrent life-threatening arrhythmias not otherwise controllable, steroid-suppressive therapy may be used concomitantly with procainamide.

ADVERSE REACTIONS: Hypotension is rare with oral administration. Serious disturbances of cardiac rhythm such as ventricular asystole or fibrillation are more common with I.V. administration.

Large oral doses may sometimes produce anorexia, nausea, urticaria, and/or pruritus.

A syndrome resembling lupus erythematosus has been reported in patients on oral maintenance therapy (see Precautions). Reactions consisting of fever and chills have been reported, including a case with nausea, vomiting, abdominal pain, acute hepatomegaly, and a rise in serum glutamic oxaloacetic transaminase following single doses of the drug. Agranulocytosis has been occasionally reported following repeated use of the drug, and deaths have occurred. Therefore, routine blood counts are advisable during maintenance procainamide therapy; and the patient should be instructed to report any soreness of the mouth, throat or gums, unexplained fever or any symptoms of upper respiratory tract infection. If any of these symptoms should occur and leukocyte counts indicate cellular depression, procainamide therapy should be discontinued and appropriate treatment should be instituted immediately. Bitter taste, diarrhea, weakness, mental depression, giddiness, psychosis with hallucinations, and hypersensitivity reactions such as angioneurotic edema and maculopapular rash have been reported.

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THE ZOLLINGER-ELLISON SYNDROME

H. Alan Perry, M.D.
Douglas L. Rollins, M.D.
Lamar M.C. Smith, Jr., M.D.
7901 First Avenue South, Suite 605
Birmingham, Alabama 35206
East End Memorial Hospital

Hypergastrinemia has been well described and reported. Recently, in a review¹, Zollinger gave credit to the development of the radioimmuniassay in amaking the current diagnosis of the ulcerogenic tumor syndrome relatively commonplace. Our experience seems to be more in keeping with the dramatic and severe forms of the disease as noted by Hallenbeck² and reported by McCormick and associates.³

Case Report Number One. This 54 year old Negro female was admitted with abdominal pain, diarrhea and a recent weight loss. The discomfort was located in the epigastrium and the right upper quadrant and had been intermittently present for several months, becoming increasingly severe and frequent just prior to admission. Similarly, diarrhea (six to ten watery stools per day) had been present for several months and recently increasing in frequency. No history of peptic ulcer disease, any food intolerance nor jaundice was obtained. Significant finds were a diffuse epigastric mass and laboratory data reflecting moderate dehydration, hypermylasemia, and hypokalemic ($K-2.9mEq/l$) alkalosis. Intravenous fluid therapy and nasogastric suction were instituted. Over night the abdominal pain and diarrhea subsided but she had produced 5 liters of nasogastric suction. Additionally her abdominal mass was less tender and her serum amylase was normal. Continued large volumes of nasogastric suction required large volumes of intravenous crystalloid with appropriate electrolyte adjustment and use of central venous pressure monitoring. As these problems corrected, the evaluation continued. An upper gastrointestinal

contrast study showed large mucosal folds (See Figure 1). The serum protein values and albumin levels were only minimally decreased. Endoscopy showed diffusely enlarged mucosal folds. Serum was submitted for a gastrin level. Meanwhile the metabolic data reflected correction of the metabolic alkalosis and after several days of nasogastric suction the tube was intermittently clamped; this was tolerated without vomiting, diarrhea subsided



FIGURE 1—This view of the contrast study demonstrates large edematous mucosal folds and an apparent extrinsic defect over the superior aspect of the antrum.

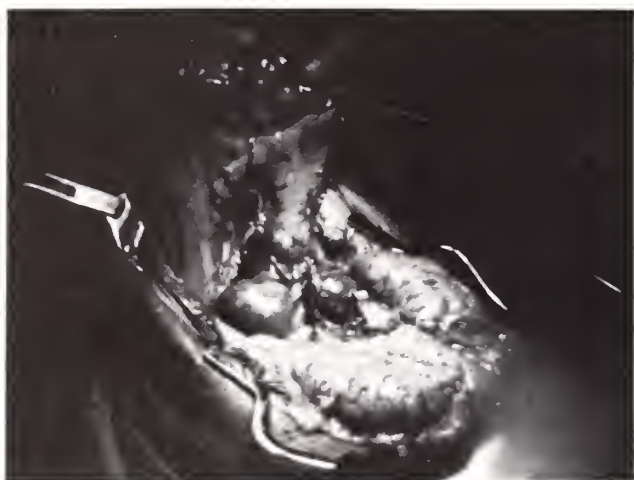


FIGURE 2—The glistening surface over the large pancreatic tumor at the base of the transverse colon mesentery is demonstrated on this photo.

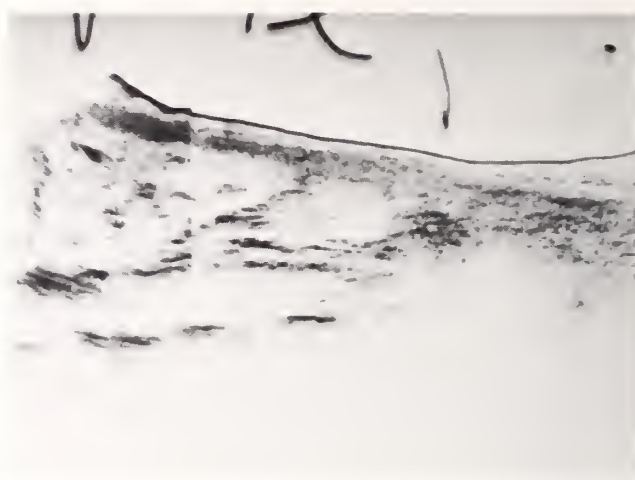


FIGURE 3—The large pancreatic mass is demonstrated on this sagittal view of the sonography study.

and the tube was removed. Additional data were a persistently elevated serum calcium and phosphorous and elevated basal and stimulated gastric acid determinations (BAO-MAO=0.71). Serum was submitted for a parathormone level. The patient was discharged from the hospital as she had resumed effective peristalsis and was asymptomatic for abdominal pain.

The serum gastrin was reported as greater than 500,000 pg/ml (N.P. -up to 300) and the parathormone levels were 904 pg/ml and greater than 950 pg/ml (normal 50-350). Calcium determinations were 13 and 14.2 ml. per dl. The patient was readmitted to the hospital. A preoperative liver scan showed marked hepatomegaly with defects consistent with metastatic disease. At celiotomy, the patient had a large mass (Figure 2) encompassing the entire pancreas with multiple diffusely located tumor nodules in the liver. A total gastrectomy was performed with gastrointestinal continuity re-established with esophagojejunostomy and jejunojunctionostomy. A liver biopsy and a feeding jejunostomy were also done.

The pathology report on the operative specimens showed islet cell carcinoma of the liver and intramural desposits in the duodenal cuff. Her post-operative course was satisfactory.

Since she had repeatedly refused readmission for neck exploration and her recent metabolic data showed a calcium of 9.7 mg. per 100 ml. and a phosphorus 2.2 mg. equivalents/milliliter (normal 0-40); weight is 109 lbs. A recent sonogram of the pancreas showed a 5.5 x 4.5 cm mass (Figure 3).

Case Number Two. This 58 year old Caucasian female was admitted for evaluation and management of upper gastrointestinal bleeding. She had had severe diarrhea daily for about two to three

year with a twenty pound weight loss and had been hospitalized recently for evaluation. During that admission (some three weeks prior to the current hospitalization), she was noted to have six to eight bowel movements per 24 hours but no abdominal cramping pain nor vomiting and on evaluation no abdominal tenderness nor masses were noted. Endoscopy showed mild duodenitis with no ulceration. An upper gastrointestinal contrast study report, however, mentioned "possibility of hypersecretion" (Figure 4). The Schilling test was normal and she was discharged with some resolution of her diarrhea. The present admission was prompted by Hematemesis, melena and syncope. On examination, blood pressure was 120/70; pulse 100. The abdomen had minimal distention and an epigastric fullness or mass with minimal tenderness was detected. Laboratory data showed a hematocrit of 25.5% (35% on the previous admission). Resuscitation with crystalloid and blood was instituted. Endoscopy (now some three weeks after the initial endoscopic evaluation) revealed a large necrotic duodenal ulcer. Additionally, overnight gastric secretions per nasogastric tube measured about 3 liters. Serum was submitted for gastrin determinations. Crystalloid infusions with appropriate electrolytes were used to correct hypokalemia (K-2.8 mEq/L). That same day two further episodes of massive bleeding prompted emergency celiotomy.

At operation, massive tumor was found which encompassed the entire pancreas and measured about 8 cm. across, 4 to 5 cm. deep, and extended for about 12 cm. along the course of the pancreas. No regional nodal nor hepatic involvement was detectable. The bleeding was controlled through a gastro duodenostomy by oversewing a large arterial



FIGURE 4—This view taken from the contrast study shows enlarged duodenal folds and ulcerations in the first and second portions of the duodenum.

bleeder in the bed of the deep necrotic posterior wall duodenal ulcer. With the bleeding controlled, a biopsy was made of the pancreatic tumor, this was markedly vascular but the bleeding was controlled with multiple stitches. The frozen section pathology report was "islet cell carcinoma". A total gastrectomy was performed and gastrointestinal continuity was reestablished with a esophagojejunostomy and a jejuno-jejunostomy. The final pathology report showed an islet cell tumor with no identifiable tumor cells in the gastrectomy specimen.

Her post-operative course was prolonged because of difficulties establishing effective peristalsis initially and then later by diarrhea as her dietary intake increased. At discharge she weighed 104 lbs. Persistent diarrhea has been a problem though currently it is under better control (three to four stools per day) using Imodium and Viokase. The most recent serum gastrin is 849 pg/ml. An echogram (Figure 5) of the palpable abdominal mass delineated the lesion as 4 x 8 cm. in size. She had been referred for consideration for chemotherapy with Streptozotocin to the Lurleen Wallace Tumor Institute.

Discussion. Many reports have described the variable symptoms of the Zollinger-Ellison Syndrome. The frequent malignancy rate of approximately 65%, the associated complication of melena and hematemesis, and the 40-50% frequency of diarrhea have been mentioned in several reviews.^{4,5} In the extensive reviews from the



FIGURE 5—This sagittal view taken from sonography of the abdomen outlines the large pancreatic mass.

Zollinger-Ellison registry^{4,6}, presentation with blood loss from melena or hematemesis occurred in 21 and 24% respectively and was said to be the third most common complaint while diarrhea occurred in about 36% of those presenting with fluid loss. The same reviews unanimously recommended total gastrectomy as the operation of choice.

Our experience is with the fulminate expression of the Zollinger-Ellison Syndrome. McCormick and associates and others, have clearly reported the problems with massively bleeding patient and resultant difficulty if less than total gastrectomy is done. Likewise, Fox and associates, specifically addressed the problems encountered in patients with complications requiring emergency operation without time for an adequate pre-operative diagnosis.⁷

They showed that of the emergent operations, 17% were for hemorrhage, thus making it a not uncommon clinical problem; case number 2 was resuscitated as usual for any GI bleeding problem and at operation a frozen section study allowed accurate diagnosis and we proceeded with a total gastrectomy. Interestingly the patient initially presented with diarrhea which occurs in approximately 1/3 of the reported cases.^{4,6,8} And as previously reported², nasogastric suction caused a temporary cessation of the diarrhea in both cases 1 and 2.

An additional consideration is the associated endocrinopathy of the gastrinoma, which is present in about 30% of the patients with Zollinger-Ellison Syndrome; the most frequent is hyperparathyroidism occurring at a rate of about 18%^{4,6,8}. The metabolic studies in case number 1 reflect hyperparathyroidism but the patient has refused further

continued on page 28

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Stead, W.W. and Bates, J., in Harrison's Principles of Medicine,
8th Edition, 1977, McGraw-Hill, p. 900.



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Reference: Diagnostic Standards and Classification of Tuberculosis. National Tuberculosis and Respiratory Disease Association, N.Y. 1969.

continued from page 25

operations at this time. Axelrod urged that an operation be performed first on the parathyroid gland because correction of the hypercalcemia may correct the clinical syndrome.⁹ We did not elect that course because of the apparent widespread disease which we thought would make response to parathyroidectomy alone an unlikely event.

Lastly, the second patient has continued to have diarrhea and weight loss. Though her findings indicated the ulcerogenic syndrome and assay is currently underway for other gastrointestinal hormones.

We wish to acknowledge the significant contributions by R. L. Williams, M.D., in the diagnosis and management of these patients. R

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The Distribution Of Lead In Human Hair

by
E. Cheraskin, M.D., D.M.D.*
and
W. M. Ringsdorf, Jr., D.M.D., M.S.**

Department of Oral Medicine
University of Alabama in Birmingham
University Station, Birmingham, Alabama 35294

"Lead is being extruded into the environment from the tail pipes of motor vehicles at a yearly rate of about two kilograms (4.4 lbs) per car. It lingers long. It is breathed by drivers, passengers, and people living in cities and near heavy traffic, who absorb it through their lungs. It accumulates in the body with age. It is a protoplasmic poison, not a very strong one in small amounts, but there is so much around that it has an effect on everyone exposed to present environmental concentrations—a measurable effect."¹ In addition, there are many industrial sources of lead pollution. Together with automotive emissions, they have literally polluted the entire earth.

A score of reports, ranging in sample size from 10 to 2,000 subjects, has been published which describes the epidemiology of lead in hair. This paper presents data on the largest sample ever studied, derived from the data bank of MineraLab, Incorporated (22455 Maple Court, Hayward, California 94540) which currently comprises 34504 subjects studied by emission spectroscopy.²

From the accompanying table, five points are worthy of special mention. First, in the male and female categories separately as well as in the total sample, the lead levels are relatively high in the

very youngest age group (0-4 years). This observation has been previously noted³ and relates in part to the higher lead concentrations in the air near the ground. Second, in the succeeding young groups, the lead levels are then lower. Third, in general, with advancing age, there is an increase in hair lead levels. Fourth, the lead values are higher in the males in every age group. However, the male values are about threefold higher in the older age groups. This is in keeping with other studies.⁴ Finally, if one considers the toxic delineating point to be 2.0 mgm.% (20 ppm), as has been mentioned⁵, then a sizeable segment of this large sample might well be demonstrating excessively high lead levels. This last point will be considered in more detail in a report to follow.⁶

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Operation **VS.** Obesity:

Success or Sentence

by

Henry L. Laws, M.D.*

Associate Professor of Surgery
University of Alabama in Birmingham
Birmingham, Alabama

ABSTRACT

Persons with significant obesity (30% above ideal weight or more) have a definite increased risk of diabetes, hypertension, stroke, and death. Extreme obesity uncommonly responds permanently to dietary or medical management. Therefore, operations to alter body physiology are being utilized to effect weight loss. Jejunoileal bypass creates a defect in absorption of ingested nutrients resulting in weight loss, but is complicated by a number of unpleasant or dangerous side effects. Gastric bypass limits intake by a reduction in stomach capacity. The chief side effect appears to be vomiting with overeating. Newer modifications of the gastric reduction procedure may decrease operative mortality and morbidity. For surgical treatment to be widely applicable, mortality will have to be nil and morbidity low so that operation may be offered to persons who are only 50% or more overweight. At present, operation should only be considered for the individual who is massively overweight.

Obesity affects one-fourth of American adults and constitutes our number one nutritional disorder. The numerous methods for weight reduction, the many books and articles for lay consumption, and the frequency one encounters discussion of the problem in avocational settings emphasize both the magnitude and the futility of the problem. Probably less than 5% of individuals who are judged to be 50% over ideal weight can successfully lose and maintain weight loss by dietary means over an extended period. Thus the surgeon has been asked to manage desperate patients.

Is obesity a truly morbid condition? The answer is an emphatic "yes"! Persons who are more than 30% over ideal weight have more hypertension, more diabetes, more strokes, somewhat more heart disease than their normal weight peers.¹ Deleterious effects on self image, energy level, work productivity, career success, and interpersonal relationships are less quantifiable but almost certainly real. Whether the physical morbidity results from the obesity itself or from co-existent hypertension, diabetes, and increased serum lipids is less clear. However, successful treatment of obesity ameliorates these problems. Rimm and co-workers studied 73,000 women finding in the 25 to 44 age group an incidence of diabetes in 1% of those of normal weight and 7% in those 100% overweight.² Normal weight adults manufacture 31 units of insulin daily, obese individuals 109 units, and adult onset diabetics 49 units.³ It is obvious that many of these obese diabetics would therefore not

*Send Correspondence To: Henry L. Laws, M.D., 713 LHR Building, Department of Surgery, University of Alabama in Birmingham, Birmingham, Alabama 35294.

require insulin supplementation if their weight were returned to normal. Reisin and colleagues found weight reduction to dramatically correct hypertension.⁴ Sixty percent of their hypertensive patients achieved normal blood pressures with weight reduction averaging 10.5 kg. All patients losing weight were improved while control patients receiving antihypertensive drugs but no weight reduction had little blood pressure reduction.

Since dietary and other non-operative methods of weight reduction offer little respite to most patients, operations to alter body physiology have been undertaken. Intestinal bypass operations have been tried extensively and do result in weight reduction of about 90% of patients averaging about 30% of pre-operative weight. Weight reduction by these operations results from decreased absorption of ingested nutrients with resultant diarrhea, and probably, decreased intake because of this latter response.

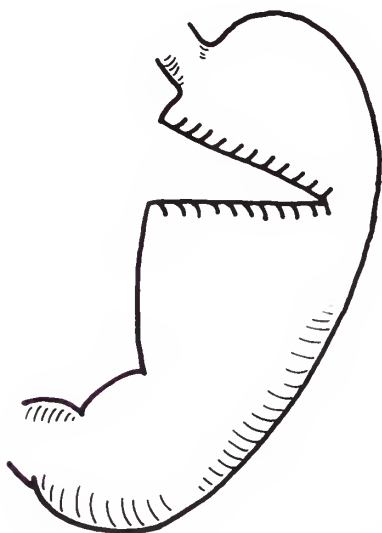
Profound alterations occur other than weight loss and cloud the ultimate benefit of weight reduction. Troublesome sequelae include diarrhea interfering with normal activity; secondary perianal pathology; foul flatus; arthritis in 20% of persons during the phase of rapid weight loss; urinary tract stones in 12-14%; and an increased

incidence of gallstones.⁵⁻¹³ Liver failure, a serious and often fatal complication, supervenes in a small percentage of patients.^{5,6,12} It now appears that as many as 30% of patients may develop symptomatic osteomalacia.¹⁴ Further long-term sequelae may well appear. Probably about 10% of patients who have experienced satisfactory weight loss have their bypass taken down because of these complications. This myriad of unpleasant side effects seriously blights the obvious success of weight reduction. In my judgement, these operations will soon lose favor and will cease to be done.

Mason and colleagues from the University of Iowa have championed a gastric reduction procedure as an alternative operation.¹⁵⁻¹⁷ Their approach causes a decrease in food intake resulting in weight loss comparable to the intestinal bypass operation. The principal untoward effect appears to be vomiting with excess food ingestion. These patients do not have diarrhea, peri-anal disease, arthritis, liver failure, or a great increase in kidney stones or gallstones.

We have employed the gastric bypass operation at the University of Alabama for the past three years on 48 patients. Weight loss has averaged 33% of the pre-operative weight at one year, and two-thirds of our patients have achieved good to

Gastroplasty



Gastric Bypass

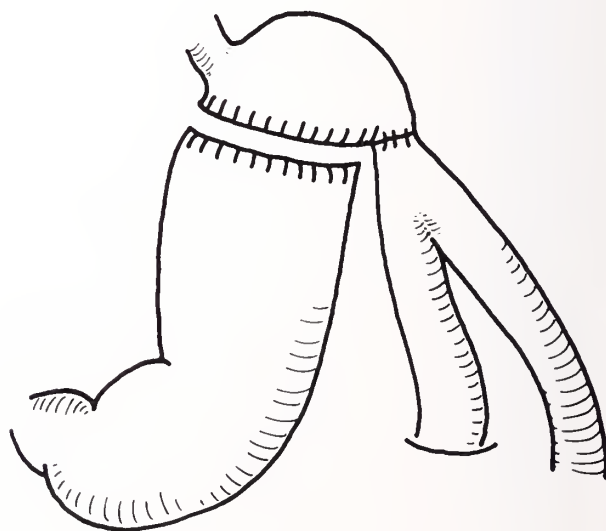
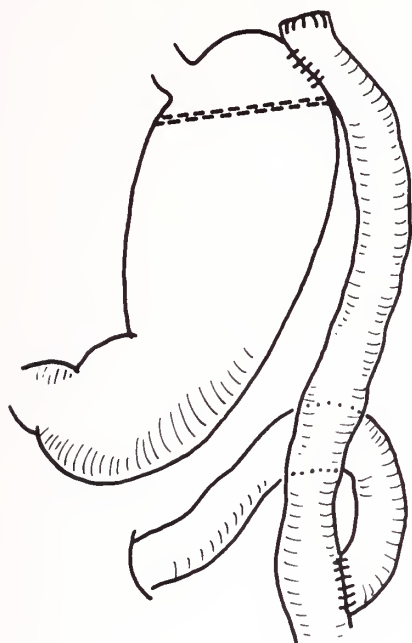


Figure 1

Gastric Bypass Roux Y



Baffle



Figure 2

excellent weight loss by that time. Some patients lose weight for 18 to 24 months. We have had two fatalities. One occurred in a 37 year old female weighing 467 pounds who died of a massive pulmonary embolus. At autopsy, both old and new pulmonary emboli were found, some of the emboli dating back two or three weeks prior to operation. The second death occurred in a 42 year old diabetic with pre-malignant hypertension and heart disease who failed to survive a complicating subphrenic abscess. Retrospectively, this man was not an acceptable candidate for operation. In addition, we have had significant complications in other patients, most involving intraperitoneal or wound infection.

Gastric bypass procedures appear to be remarkably free of the complications haunting the intestinal bypass patients, but long-term sequelae have not been fully studied. It is significant that not a single surgeon who has tried both the intestinal bypass and the gastric bypass in a sequential or randomized trials favors the former.¹⁸⁻²⁰

Both the intestinal and the gastric operations result in mortality (1-4%) and encounter significant operative morbidity making these procedures an unacceptable option in all but massively obese

individuals. Consequently, our indications for surgery are listed in the Table. The patient should be a mature adult who is at least 100% overweight. If the patient has complicating diabetes, hypertension, chronic backache, varicose veins, stasis dermatitis and the like, the surgery is likely to offer greater benefit. We try to exclude patients with symptomatic aortic stenosis or myocardial ischemia.

The Iowa group, early in their experience, tried a gastroplasty (Fig. 1a) as a simpler procedure than gastric bypass with gastrojejunostomy (Fig. 1b),¹⁶ which is now their standard procedure. Unfortunately, their patients receiving gastroplasty did not achieve satisfactory weight loss. Recently, others have tried variations of the gastroplasty using the mechanical stapling device. Drs. William Pace and Larry Carey of Columbus, Ohio remove three staples out of the stapling device before application creating a small upper gastric reservoir with a tiny opening into the remainder of the stomach away from either curvature. This operation (which I call a gastric baffle procedure) requires no anastomosis and should be less morbid. If it does achieve satisfactory weight loss and the

continued on page 39

COMMITTEE OF PUBLIC HEALTH

The State Committee of Public Health took the following actions at its meeting on March 21, 1979:

- Received a report from the State Health Officer regarding a limited increase in the State General Fund of only 2.67% for the next fiscal year which will make any increase in the budget for the State Health Department and its programs extremely limited.

- Received a report of action by the Statewide Health Coordinating Council regarding Hospital Bed Need Planning Methodology adopted by SHCC on March 1, 1979.

- Adopted the Planning Methodology as adopted by PDC-SHCC without the two amendments and further recommended that the State Medical Facilities Plan currently being developed under Title VI "take into account" the National Planning Guidelines. Approved a resolution of explanation and comments regarding this action on proposed Planning Methodology for Acute General Hospitals.

- Received a report on Fire History of United States Hospitals and noted the favorable record in Alabama indicating that during the period 1971-76 there were no multiple deaths from fire in hospitals or nursing homes in Alabama. There was only one death in nursing homes during this period with the patient dying of a heart attack rather than fire resulting from smoking immediately prior to death. Three fire related deaths in three separate incidents in hospitals included one in the U.S. Army Hospital in Ft. Rucker.

- Approved a Certificate of Need Schedule for adopting rules and regulations with a proposed date of public hearing in Montgomery on April 24, 1979.

- Approved Proposed Rules and Regulations, *Procedures Manual and Review Criteria* for Certificate of Need for hearing purposes.

- Approved with favorable findings and recommendations the request for an open heart surgery project by Baptist Medical Center-Princeton, Birmingham.

- Received information on the success of the hypothyroid screening program with 3 new positive patients identified for a total of 8 with hypothyroidism out of 41,000 screened since February 1978, and noted the cost effective benefits of these findings in addition to the personal benefits to the individuals and families concerned.

- Was advised of the closure of Oyster Beds on March 5, 1979.

- Took note of a letter of commendation from Ms. Sara V. Craig, Principal Regional Official, DHEW, recognizing Corner School, Jefferson County Schools, for 100% immunization of students through 18 years of age.

- Received a report of activities regarding the Regional Perinatal Advisory Committee and made a referral for further consideration of appointees.

- Received copies of Alabama's Vital Events for 1977 prepared by the State Health Department's Special Services Administration, Division of Vital Statistics, breaking down data by county for more complete utilization in planning by Health Systems Agencies and others.

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Brief Summary

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CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSAGE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride) One 25 mg tablet three times daily one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenitamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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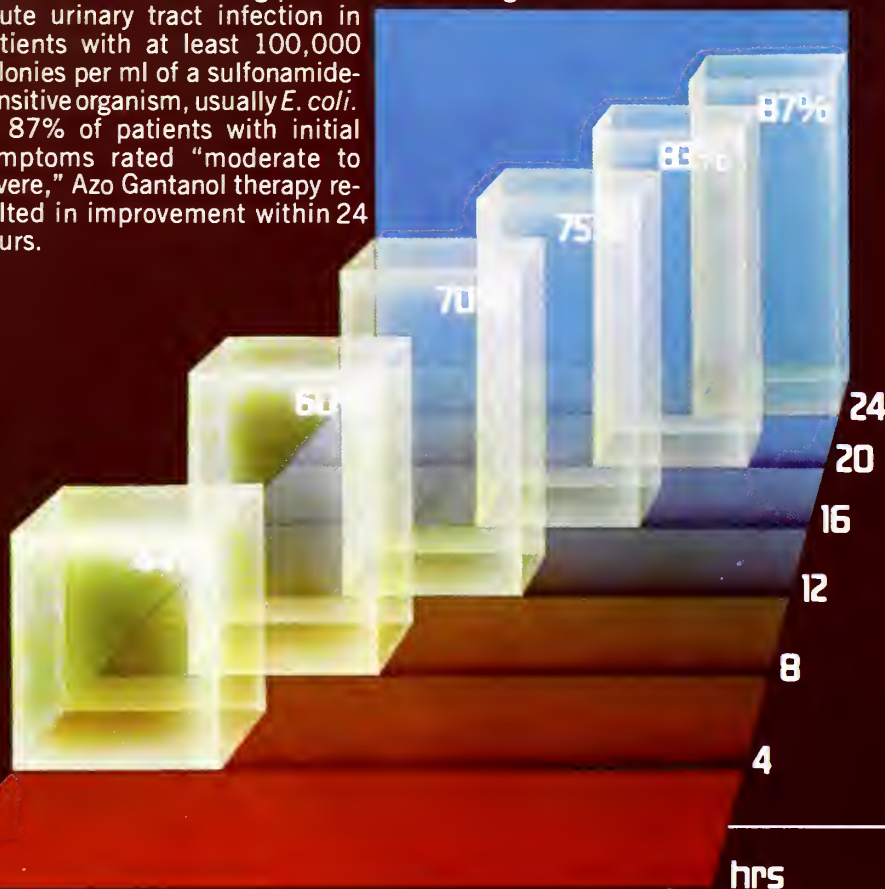


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A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



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Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

for
the pathogens

Before prescribing, please consult complete product information, a summary of which follows:
Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.



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expected low morbidity, then it should rapidly become the procedure of choice.

At the University of Alabama in Birmingham, we are presently randomizing the gastric bypass with Roux Y gastrojejunostomy (Fig. IIa) with the gastric baffle (Fig. IIb) in an attempt to determine which is the superior operation. Our criteria for surgery are still those listed in the Table. Overall we are encouraged with the gastric bypass procedure and feel strongly that it is superior to intestinal bypass. If the baffle procedure induces weight loss, it should be associated with vastly less morbidity. However, long-term data on patients undergoing procedures of this type are not yet available.

For surgery to be a practical alternative in the treatment of obesity, operative mortality will have to be nil and the operative morbidity will have to be low so that surgery may be offered for those persons only 50% overweight. These individuals are at an increased risk of death one and one-half times that of their normal weight peers with little hope of achieving permanent weight reduction by other than operative means. Their body habitus would allow easier and probably safer operation. A 30% weight reduction in these persons would offer

them a near normal weight and would not leave them with huge, bothersome, and unsightly skin folds.

CRITERIA FOR SURGICAL TREATMENT

- 1) Ages 20 - 50
- 2) A body weight twice or more the ideal body weight*
- 3) Lack of effective response to dietary measures
- 4) No contributory endocrine disease
- 5) The presence of complicating medical illnesses including cardio-respiratory problems (especially Pickwickian syndrome and hypertension, severe extertional dyspnea, previous pulmonary emboli), chronic low backache, varicose veins, leg swelling, stasis dermatitis, and adult onset diabetes
- 6) No aortic stenosis or myocardial ischemia
- 7) A patient of sufficient intelligence to understand the implications and the possible complications of the operative procedure
- 8) Agreement by the patient to return for periodic follow-up for at least two years

*For medium frame individuals by the Metropolitan Life Insurance Scale

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THURSDAY, APRIL 19

9:00 a.m.—12:00 noon

Orientation Program

2:00—5:00 p.m.

Reference Committee Hearings

FRIDAY, APRIL 20

9:00 a.m.—12:00 noon

General Scientific Session

11:15—12:00 noon

Jerome Cochran Lecture

by Tom E. Nesbitt, M.D.

President, American Medical Association

2:00—5:00 p.m.

Section on Accidents

Section on Cancer

Section on Maternal and Child Care

Section on Pulmonary Diseases

SATURDAY, APRIL 21

9:00 a.m.

Annual Business Session

SOCIAL EVENTS

THURSDAY, APRIL 19

7:30 a.m.

Auxiliary to MASA Breakfast

Hugo's, Hyatt House

12:30 p.m.

Auxiliary Luncheon and Tour of Homes

8:00—11:00 p.m.

Jefferson County Medical Society

Reception and Buffet

Dance music provided by

Harrison Cooper's Orchestra

The Club

FRIDAY, APRIL 20

6:30 p.m.

ALAPAC Cocktail Reception

North Meeting Room

Birmingham-Jefferson

Civic Center

8:00 p.m.

Awards Banquet

South Meeting Room

Birmingham-Jefferson

Civic Center

Entertainment by the

Auburn University Singers

12:30 p.m.

Auxiliary Luncheon

South Meeting Room

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Treatment with TRIAVIL— a balanced view:

TRIAVIL is contraindicated in CNS depression from drugs, in the presence of evidence of bone marrow depression, and in patients hypersensitive to phenothiazines or amitriptyline. It should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. TRIAVIL may impair mental and/or physical abilities required for performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to overdosage of other drugs or mask other disorders. The possibility of suicide in depressed patients remains until significant remission occurs. Such patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

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for a brief summary
of prescribing information.*

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TRIAVIL® 4-10: Each tablet contains
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CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

WARNINGS: TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdosage. Not recommended in children or during pregnancy.

PRECAUTIONS: Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

Perphenazine: Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

Amitriptyline: In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

ADVERSE REACTIONS: Similar to those reported with either constituent alone. **Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have also been reported.

Amitriptyline: Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia, nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. **Gastrointestinal:** Nausea; epigastric distress; vomiting; anorexia, stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

OVERDOSAGE: All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

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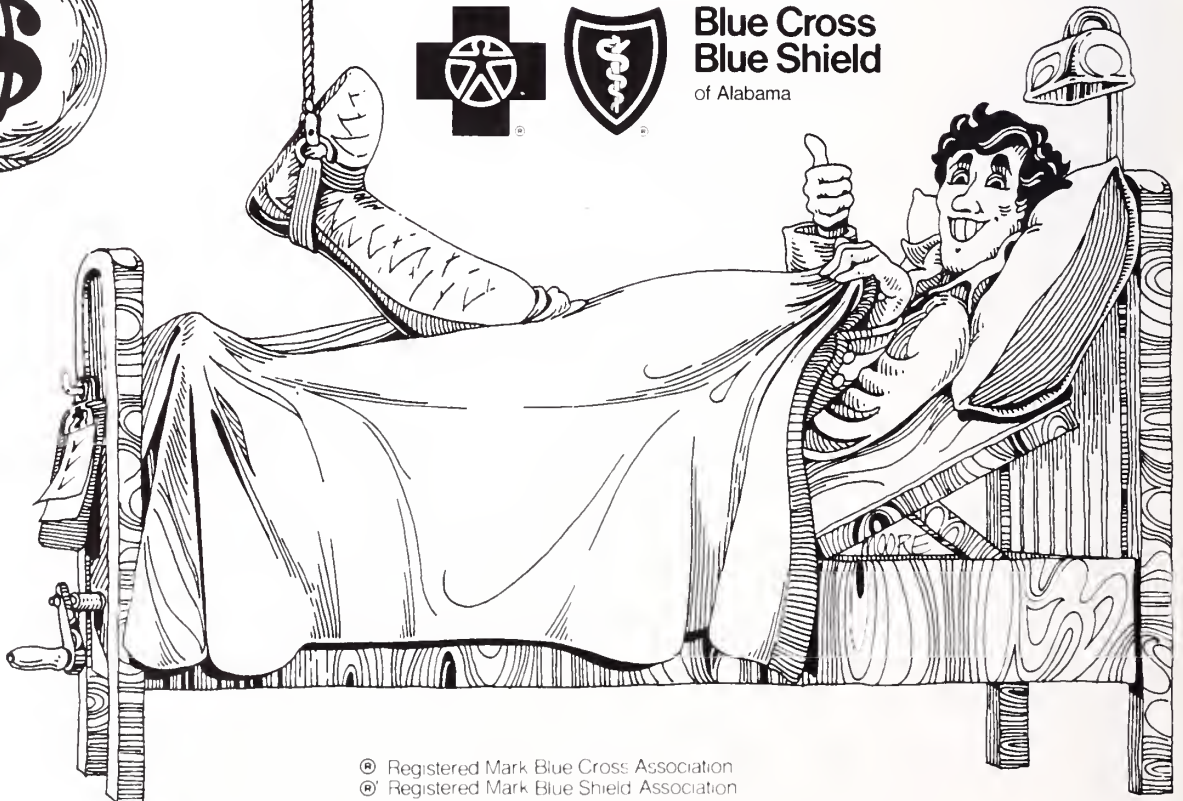
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LOCATIONS WANTED (Physicians interested in locating in Alabama)

ANESTHESIOLOGY: Age 30; India, 1973; American Board Eligible; seeking practice in specialty; private, solo or group. Available July 1979. LW-030279.

EMERGENCY MEDICINE: Age 42; Emory 1965; seeking practice in institutional or industrial medicine in the coastal/northern section of Alabama preferably in Mobile, Huntsville or Montgomery. Available immediately. LW-030379.

FAMILY PRACTICE: Age 31; University of Alabama, 1974; Board Eligible in Family Practice; seeking practice preferably in the southern part or on the coast. Available immediately. LW-02270.

FAMILY PRACTICE: Age 37; Ranga Raya Medical School, 1972; will be American Board Eligible in 1979; seeking practice in specialty preferably in Birmingham and suburban areas. Available July 1979. LW-02379.

FAMILY PRACTICE: Age 45; University of Saskatchewan, 1968; National Board Certified; American Board Certified; American Board Eligible; seeking practice in research, multi-specialty group or partnership. Available May 1979. LW-14776.

GENERAL PRACTICE/GENERAL SURGERY: Age 32; University of Buenos Aires; 1969; American Board Eligible; seeking practice in general practice, specialty, assistant or associate preferably in the coastal area with a population of 5,000 plus. Available April 1979. LW-030179.

GENERAL PRACTICE/OBSTETRICS & GYNECOLOGY: Age 59; Medical College of Alabama, 1954; American Board Eligible; seeking practice in multi-specialty group, single specialty group or partnership in a community of 25,000-99,999 population. Available. LW-14553.

GENERAL PRACTICE/EMERGENCY MEDICINE: Age 37; Cebu Institute of Medicine, 1968; seeking practice in partnership, solo, industrial or emergency room. Available July 1979. LW-14672.

OBSTETRICS & GYNECOLOGY: Age 43; Medical College of Georgia, 1975; seeking practice in specialty, solo or group preferably in the coastal area. Available January 1980. LW-030479.

OBSTETRICS & GYNECOLOGY: Age 30; Meharry Medical College, 1973; will be American Board Eligible in 1979; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1979. LW-13835.

OPHTHALMOLOGY: Age 28; Duke, 1976; seeking practice in Ophthalmology or Academic in a town of 75,000 plus population. Available January 1981. LW-02579.

PEDIATRICS/NEONATAL: Age 34; Howard University, 1972; American Board Certified; seeking practice in specialty preferably in the Birmingham area. Available July 1979. LW-030579.

PSYCHIATRY: Age 44; University of Toronto, 1959; American Board Certified; seeking practice in Psychiatry preferably in the southern section of Alabama. Available for practice in the near future. LW-02679.

ORTHOPEDIC SURGEON: Age 30; University of Tennessee, 1973; American Board Certified; seeking practice in specialty in a town with a population of 15,000 or greater. Available January 1980. LW-11478.

SURGEON/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single

specialty group or solo. Available July 1979. LW-12031.

GENERAL SURGERY: Age 32; Case Western Reserve University, 1974; seeking practice in solo or group practice. Available July 1, 1979. LW-02879.

GENERAL SURGERY: Age 34; Temple University; 1969; American Board Certified; seeking practice in a town with a population of more than 50,000. Available November 1979. LW-02979.

GENERAL SURGERY: Age 29; University of Mississippi; seeking practice in Alabama. LW-02779.

SURGERY: Age 45; Tufts University, 1957; seeking assistant or associate practice in a town with a population over 50,000. Available December 1979. LW-020179.

PHYSICIANS WANTED (Opportunities for Practice)

PRIMARY CARE PHYSICIAN—Wanted to serve as Medical Director of a Primary Care Group Practice. Will be a Montgomery, Alabama hospital employee with the opportunity to develop the ideal Primary Care Group Practice. Moving expenses, salary, other fringe benefits. PW-030179.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles north-west of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

PEDIATRICIAN—Wanted to join an established and practicing pediatrician in opening a new office in an area adjacent to Birmingham in one of the most rapidly growing areas in the state. PW-04179.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic are provided by residents of the family practice residency training program on a rotation basis. The clinic is in its third year of operation. The city is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.



AUXILIARY

Mrs. Aubrey E. Terry
President, A-MASA

"Belong to Care, Belong to Share"

"That person is a success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of children; who has filled his niche and accomplished his task; who leaves the world better than he found it; who never lacked appreciation of the earth's beauty or failed to express it; who looked for the best in others and gave the best he had."

In this quote, Robert Louis Stevenson talks about values, values which we as member of the Auxiliary believe in and try to practice.

Now the 1978 - 1979 Auxiliary year is almost history. It has been a good year because of each person's work. A year in which we've cared about people and a year in which we've tried to share to see that needs were met in our communities.

For me, it's been a time in which I've felt your warmth, the warmth that comes from association with people who share mutual concerns. I've been the recipient of that warmth as I have met with members at state and county meetings. And I have enjoyed it thoroughly.

On one of my plane trips, brief case and all, I was sitting by a gentleman absorbed in his "papers." He looked at mine and said, "What company are you with?" When I said AMASA he said, "What position?" My reply was a "Volunteer."

His next question, "What's that?" was the wrong one to ask me, because I gave him a 5-minute reply of what a volunteer in our Medical Auxiliary does across the State of Alabama and the nation.

As you can see I am proud to be a "Volunteer in your company" and to know our work does count. We can see just how much as the counties sent their yearly activities and reports. I hope you will read this composite report in the 1979 Handbook for Counsellors and Delegates. I think you will be pleased with your "Volunteer Spouse."

The Jefferson County Medical Society and the Jefferson-Birmingham Auxiliary are planning many exciting activities to make our stay in Birmingham enjoyable for the Annual State Convention, April 19 - 21, 1979. Meet you there!

As my year as President of the Auxiliary to the Medical Association of the State of Alabama ends I would like to challenge each one to continue working toward the goal of making this a happier, healthier world for all—ourselves, our families, our communities and our nation.

When the indications surface...

Net wt 1 oz

Net wt 1/2 oz

Net wt 1/32 oz (approx)

Net wt 1 oz

NEOSPORIN
OINTMENT

POLYMYXIN B-BACITRACIN-
TOPICAL ANTIBACTERIAL

Net wt 1/2 oz

NEOSPORIN
OINTMENT

Net wt. 1/32 oz (approx.)
NEOSPORIN
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TOPICAL ANT

NEOSPORIN[®] Ointment

(Polymyxin B-Bacitracin-Neomycin)



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Each gram contains: Aerosporin[®] (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically*, (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyoderma (impetigo, ecthyma, sycosis vulgaris, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the

ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control

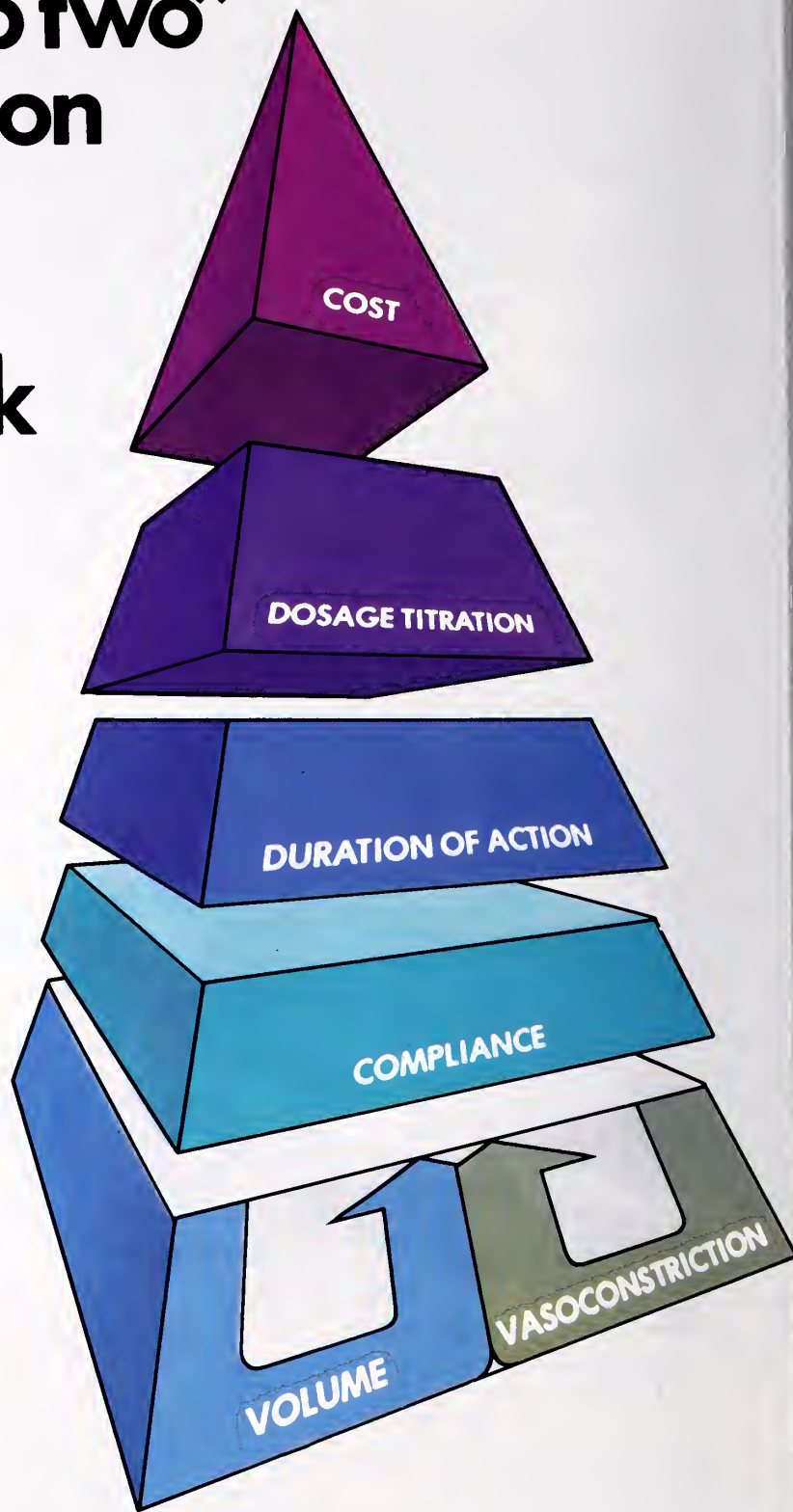
secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching, it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

**As in a pyramid,
sound "step two"
hypertension
therapy
requires
every block**



Saluron[®]
(hydroflumethiazide 50 mg.)

Salutensin[®]
(hydroflumethiazide 50 mg./reserpine 0.125 mg.)

Salutensin-Demi[™]
(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

Cost

According to a recent study,¹ Salutensin[®] (hydroflumethiazide 50 mg./reserpine 0.125 mg.) was the most economical "step two" therapy... about $\frac{1}{3}$ the cost of a day's supply of thiazide + methyldopa or thiazide + propranolol.²

Dosage titration

Salutensin contains the recommended effective doses of both its components, requiring minimal titration.

Duration of action

Salutensin contains Saluron (hydroflumethiazide), an intermediate-acting thiazide diuretic, which works over an 18-24 hour period, ideal for once-daily therapy.

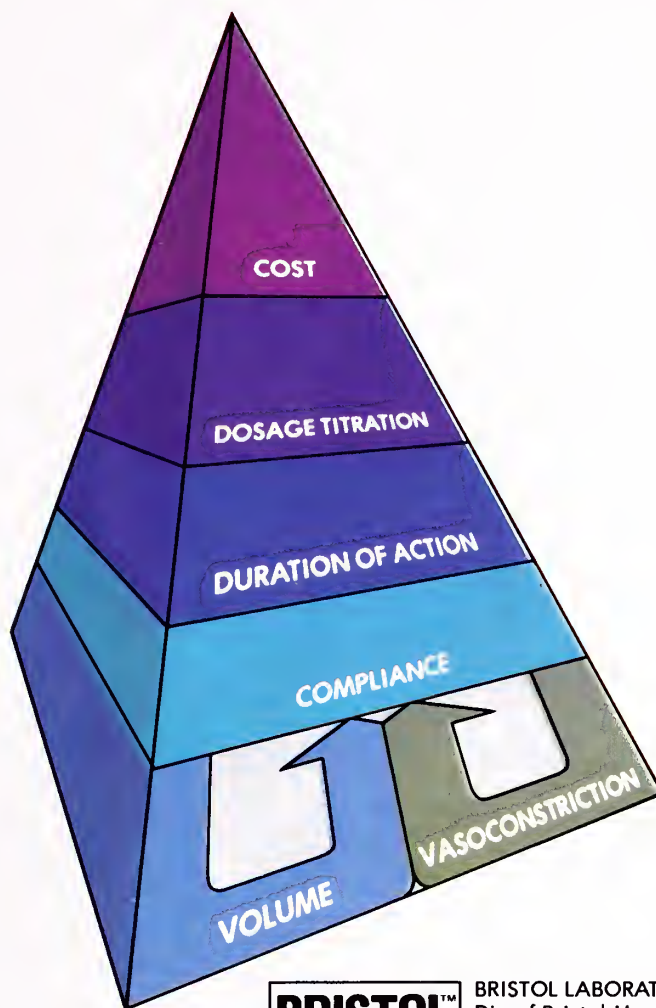
Compliance

The total daily dose can be given once a day. Compared with multiple-daily-dosage medications, the chance of a missed dose is greatly reduced.

Volume/vasoconstriction

At the foundation of "step two" hypertension therapy, control of both circulating volume and peripheral resistance can be effectively achieved with the combination tablet Salutensin one day at a time.

the family of
antihypertensives
completing the
therapeutic pyramid



BRISTOL[™]

BRISTOL LABORATORIES
Div. of Bristol-Myers Company
Syracuse, N.Y. 13201

References: 1. Finnerty, F.A. et al.: An Evaluation of Step 2 Regimens in Hypertension, data on file, Bristol Laboratories, 1977. 2. Red Book 1977.

For a summary of prescribing information, please see following page.

Saluron®

(hydroflumethiazide 50 mg.)

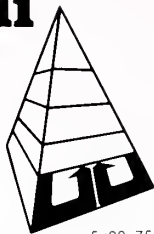
Salutensin®

(hydroflumethiazide 50 mg./reserpine 0.125 mg.)

Salutensin-Demi™

(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

structured for the
long run in "step two"
hypertension



5/20/75

Saluron® (hydroflumethiazide)

For complete information consult Official Package Circular.

CONTRAINDICATIONS: Patients with anuria, oliguria, or hypersensitivity to this or other sulfanamide derived drugs.

WARNINGS: Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in pregnancy: Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing mothers: Thiazides cross the placental barrier and appear in cord blood and breast milk.

PRECAUTIONS: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity. Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS:

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

USUAL DOSE: The average adult diuretic dose is 25 to 200 mg. per day.

The average adult antihypertensive dose is 50 to 100 mg. per day.

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

HOW SUPPLIED: Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

Salutensin® • Salutensin-Demi™

(12) 10/27/78

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in pregnancy: Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being pre-diabetic should be kept under close observation if treated with this agent.

ADVERSE REACTIONS: Hydroflumethiazide: Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE: 1 tablet b.i.d.

HOW SUPPLIED: Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

BRISTOL

BRISTOL LABORATORIES
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Syracuse, N.Y. 13201

MC221

Librium®

chlordiazepoxide HCl/Roche



- ☐ Proven antianxiety performance
- ☐ An unsurpassed safety record
- ☐ Predictable patient response
- ☐ Minimal effect on mental acuity at recommended doses
- ☐ Minimal interference with many primary medications, such as antacids, anticholinergics, diuretics, cardiac glycosides and antihypertensive agents

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and

acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. Oral—Adults: Mild and moderate anxiety and tension, 5 or 10 mg t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i.d. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) Capsules, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) Tablets, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

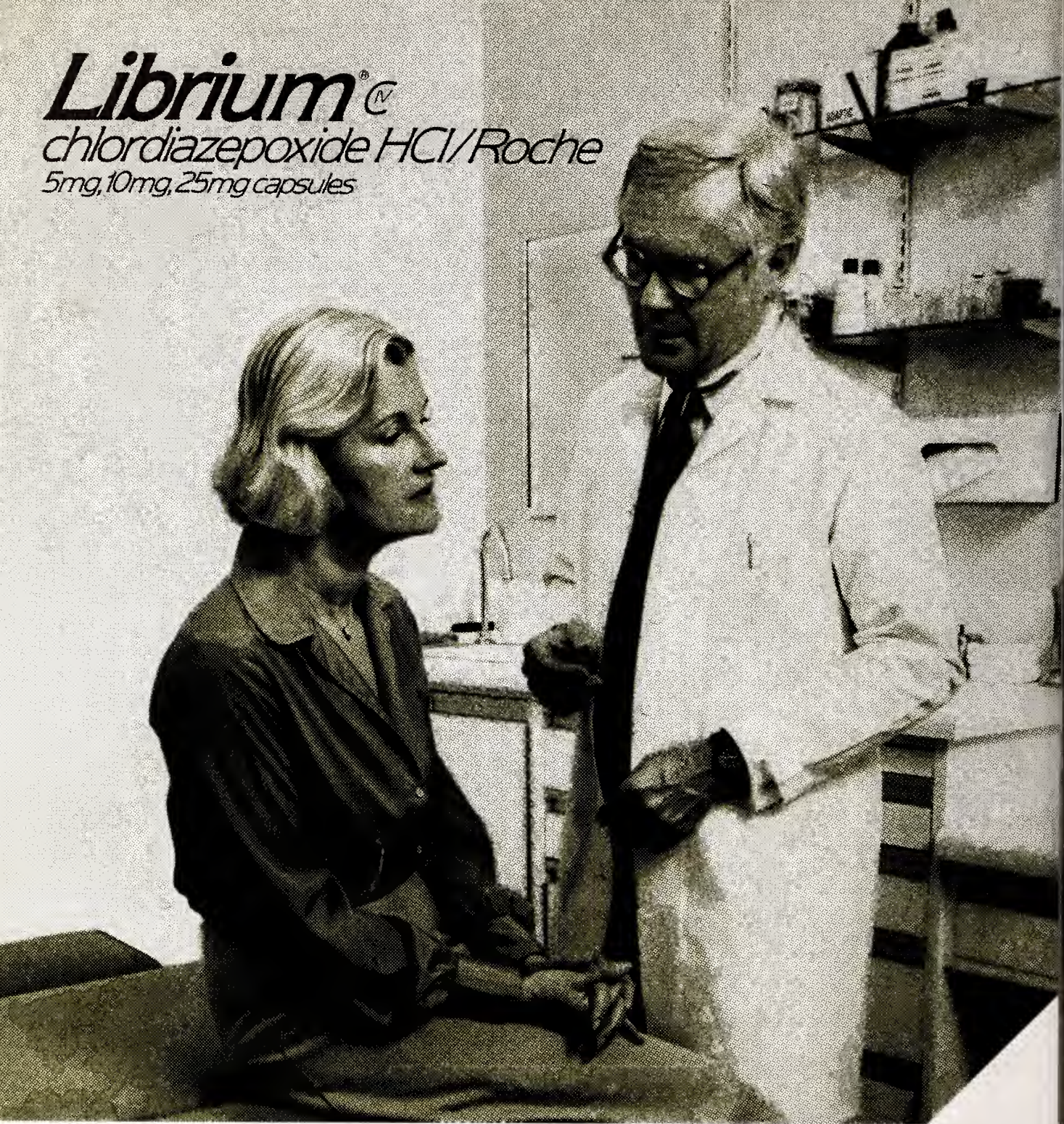
synonymous with relief of anxiety

ROCHE

Roche Products Inc.
Manati, Puerto Rico 00701

Please see following page.

Librium[®]
chlordiazepoxide HCl/Roche
5mg, 10mg, 25mg capsules



synonymous with relief of anxiety



Please see preceding page for a summary of product information.

JOURNAL

of the Medical Association of the State of Alabama

MAY, 1979

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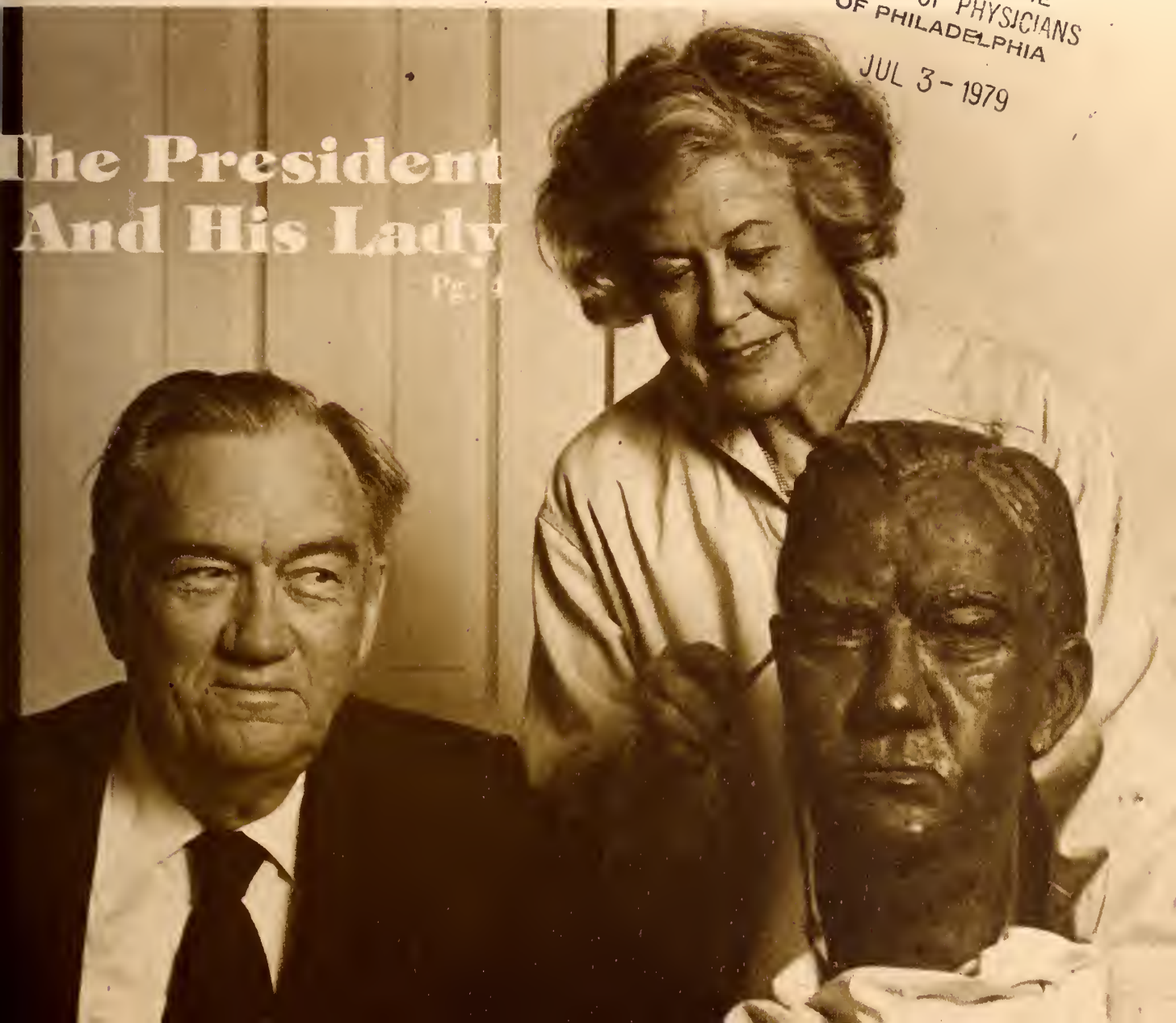
vol. 48 #11

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JUL 3 - 1979

The President
And His Lady

Pg. 4



THE MESSAGE OF TENSION

HEADACHES
SWEATS

TENSE, TAUT MUSCLES
HYPERVENTILATION

TACHYCARDIA

PALPITATIONS

BURNING IN STOMACH

FULLNESS

FREQUENCY

to relieve psychic tension
and its functional symptoms

VALIUM[®]
(diazepam)^(v)

2-mg, 5-mg, 10-mg scored tablets

VALIUM[®] (diazepam)

Before prescribing, please consult complete product information, a summary of which follows:

Indications: tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; ataxia; stiff-man syndrome; convulsive disorders (not for sole therapy).

The effectiveness of Valium in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

Use in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over-sedation.

Side Effects: Drowsiness, confusion, diplopia.

hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice, periodic blood counts and liver function tests advisable during long-term therapy.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

JOURNAL

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EDITOR-IN-CHIEF

William L. Smith, M.D., Montgomery

ASSISTANT EDITOR

Wm. H. McDonald, Montgomery

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About the Cover

What is happening in the cover picture to MASA's new President, Luther L. Hill, M.D., will be found on page 4. Coverage of the 1979 annual session in Birmingham begins on page 23. Photographs by Rhonda M. Montgomery and William H. McDonald of MASA, and Robert Phaturros, State Health Department. Don't miss the special fold-out opposite page 27.

Information For Authors Concerning Manuscripts

Manuscripts should be typewritten, double-spaced on white paper 8½x11 inches with adequate margins. The original copy, not the carbon copy, should be submitted. Authority for approval of all contributions rests with the Editor. *The Journal of The Medical Association of The State of Alabama* reserves the right to edit any material submitted. The publishers accept no responsibility for opinions expressed by contributors.

Style: The first page should list title, the author (or authors), degrees, and any institutional or other credits. Bibliographies must contain, in the order given: Name of author, title of article, name of periodicals with volume, page, month—day of month if weekly—and year. Number should be limited to absolute minimum. References should be numbered consecutively in order in which they appear in the text.

The *Stylebook/Editorial Manual*, published by the AMA, is the general reference for questions of style. It is particularly useful in the proper presentation of data. Available at cost (\$6.50) from MASA. When conflicts occur between usage, etc., by an author and the stylebook, these will be resolved in favor of the author if his method is persuasive and logical.

Helpful to many writers is *The Elements of Style* by William Strunk Jr. and E. B. White, which emphasizes brevity, vigor and clarity. Available at cost (\$1.65) from MASA.

Final authority on grammar is Webster's *New International*, Unabridged, Second Edition.

Copy Changes: When an author receives a galley proof back from MASA, he is expected to make corrections only. Copy changes, alterations on proof from the original manuscript, are expensive. Please try to say what you mean in the original.

Length of Articles: Articles should not exceed 3,000 words (approximately 3-4 printed pages). Under exceptional circumstances only will articles of more than 4,000 words be published.

Illustrations: Illustrations should be numbered consecutively and indicated in the text. The number, indication of the top, and the author's name should be attached to the back of each illustration. Legend should be typed, numbered, and attached to each illustration. Photographs should be clear and distinct; drawings should be made in black ink (preferably India ink) on white paper. For half tones, glossy photographs should be submitted.

Reprints: Reprint orders should be returned at once. Prices for reprints, based on number of pages, will be furnished upon request. Communications should be addressed to *The Journal of The Medical Association of The State of Alabama*, P.O. Box 1900-C, Montgomery, Alabama 36104. Telephone 263-6441, Area Code 205. ●

From the Executive Director

A Sense of History

In this issue of the Journal we are trying to do what photographs do better in some ways than words—record the way it was at the 1979 annual session of the Medical Association of the State of Alabama.

When you browse through the issue to study the scenes and faces, you may find amusement in wondering what some future historian will say about Alabama medicine just before the 1980s began.

Our dress may seem quaint, as the dress of Alabama physicians of a century ago seems quaint today. There is certainly the possibility that some of the ideas set forth in this year's scientific session will seem outmoded at say, the dawn of the 21st century, which is not all that far away.

The Journal you are looking at today will be time-capsuled in archives in this and other countries, to be retrieved at some future time by men and women of medicine who will want to know how it all looked back in the olden days.

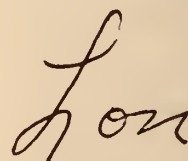
It gives us all an humbling sense of mortality, as we look at these scenes of 1979, to know that, one day, these will in truth be the olden days. History is capricious. None dares predict what it will say about the United States or Alabama as we move well into the final quarter of the 20th Century.

The celebrated marvels of our age will be antiquated by then. Ways of life will have undergone alterations that cannot be accurately foreseen now, any more than the physicians of MASA who gathered 118 sessions ago could have predicted our life today, or the state of the art and science of medicine in 1979.

But medicine is perhaps unique among the mature sciences in its consciousness of change. Medicine is a continuum unlike any other science because it is the closest to the ever changing needs of humanity.

Medicine has never, since its earliest beginnings, stood still. Advance and innovation are indeed the life force that has sustained it and enriched it through the centuries. It is an eternal stream, but a Greek poet put it well when he observed almost 1500 years ago that "all things change, nothing perishes."

The 218th annual session of the Medical Association of the State of Alabama is due in the year 2079. If these photographs survive, we can be sure of only one thing: the contributions of the men and women depicted in these pages shall never perish.



S. Lon Conner



Luther L. Hill, M.D.
President

The Dedicated Physician

I greatly appreciate your electing me to the office of President.

The highest honor that a physician can attain is to have the respect and trust of his fellow physicians, and the election to this office I interpret as a manifestation of this confidence.

I will do the best that I can to justify this trust during the coming year.

Our constitution lists as its objective "to promote and preserve the highest standards of professional education and moral conduct for practitioners of medicine for the purpose of protecting the people of the state against the evils of ignorance and dishonesty."

This is certainly a noble motive. To me it is significant that protection of the public is a prime objective of our organization. We are a select group of men and women who are bound by a common interest of helping, of rendering assistance. This is why we chose the profession in the first place and let us not get so involved in the daily stresses that we forget it.

The greatest reward that a physician receives is the love and appreciation he or she receives from a patient. Think about it. If you are smart enough to earn an M.D. degree you would be a success in any business you wanted to be a part of. But would you get the same gratification? Could you be as dedicated?

I doubt it, but there is a worry that the many stresses to which a physician is now subjected to will make him forget the simple pleasures of a doctor-patient relationship. Don't let this happen or you will no longer be a dedicated physician, but a business-man.

Luther Hill

The President and

His Lady



The lady on the *Journal* cover doing finishing touches on the bust of MASA's new President, Luther L. Hill, M.D., knows her subject well. This picture of Dr. and Mrs. Hill was taken on their 46th wedding anniversary. Mrs. Hill is an accomplished artist.

Dr. Hill opened his surgical practice in Montgomery in 1931. Two years later he married the former Elizabeth (Betty) Bowers of New Orleans. They met there while he was a medical student at Tulane. He completed his surgical residency at Touro Hospital, New Orleans.

It was pure chance that they met at all—a series of chances, in fact, the first one dating from the infancy of Luther Hill.

He was ill for a long time and his mother hoped that one day he would be a baby doctor and thus spare children then unborn his protracted illness. Dr. Hill:

"My mother, God bless her, always used to say she wanted me to be a baby doctor. That's where it came from. And as I grew up, she kept saying that. So I naturally decided the practice of medicine wouldn't be a bad thing to do."

He was also influenced by the example of his famous uncle, Dr. L.L. Hill, the pioneer heart surgeon who made medical history in Montgomery operating on the heart of a black youth.

Dr. Hill was diverted by surgery at Tulane, but in all other respects he fulfilled his mother's wishes, earning a reputation as one of Montgomery's premier surgeons and highly regarded in the state and the nation.

But back to that chance encounter with Elizabeth Bowers in New Orleans. A party was being planned in a house next to one where Luther Hill roomed, dormitories being a futuristic concept then. They needed some eligible young men to balance the invitation list. He was among those invited.

Dr. Hill recalls with a chuckle that what attracted him most to his future wife at their first meeting was an unusual flushed complexion. Another chance occurrence, as it turned out: she was coming down with measles.

Dr. Hill is known in Montgomery not alone for his professional skill but also for his courtly manners. He is, without apology, a Southern gentleman of the old order, although a small plot of ground where he grows vegetables (and at one time, camellias and azaleas) has to make do for a plantation.

The Hill family in Montgomery is distinguished in the contributions the various branches of it have made in medicine, dentistry, law and public service.

Dr. and Mrs. Hill live simply in a large old house on Felder Avenue,

bought after his wartime service (as an Air Force base surgeon and hospital base commander) to accommodate a growing family.

Apart from gardening and reading in his well stocked library, Dr. Hill's diversion is occasional pond fishing and a monthly trip to Fort Walton, where he has a 25-footer, the *Betty B.*

Just being near the water and looking out at the far horizon gives Dr. Hill a sense of release and escape:

"You get the feeling you could go anywhere in the world if you wanted to. Of course you never do."

They don't own a gulf house, preferring to rent small efficiency apartments and let others worry about cleaning, repairing pumps, winter maintenance and the rest.

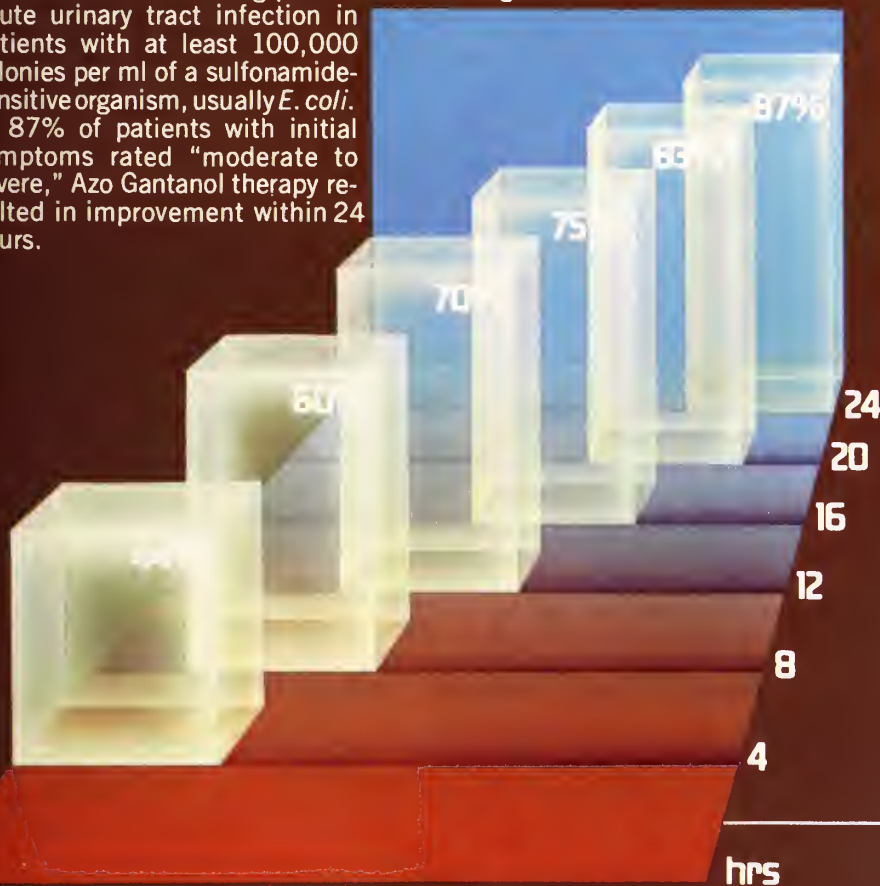
Dr. Hill has served as President of the Alabama chapter of the American College of Surgeons, in which he is a Fellow, and the Montgomery County Medical Society. He was a 1963-73 member of the Board of Censors and Vice President in 1975.

Dr. and Mrs. Hill have three children: Mrs. John Scott, Jr., Luther Hill, Jr., and Mrs. Carey Pickard, Jr. There are seven grandchildren. —W.H.McD.

Important data on the pain of acute cystitis:

In 87% of patients studied (303 of 349), Azo Gantanol® reduced pain and/or burning within 24 hours*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for
the pain

for
the pathogens

Before prescribing, please consult complete product information, a summary of which follows:
Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

Warnings: Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *G.I. reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Azo Gantanol is intended for the acute, painful phase of urinary tract infections. *Usual adult dosage:* 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

Supplied: Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



A reminder

ZYLOPRIM[®]

(allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

INDICATIONS AND USE: This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim[®] (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout,
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

CONTRAINDICATIONS: Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.

WARNINGS: ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease. Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol[®] (mercaptapurine) or Imuran[®] (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

Usage in Pregnancy and Women of Childbearing Age: Zyloprim[®] (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

PRECAUTIONS: Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or sub-normal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

ADVERSE REACTIONS:

Dermatologic: Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

Gastrointestinal: Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

Vascular: There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angitis which have led to irreversible hepatotoxicity and death.

Hematopoietic: Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim[®] (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

Neurologic: There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

Ophthalmic: There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yu for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

Drug Idiosyncrasy: Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

OVERDOSAGE: Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

HOW SUPPLIED: 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

COMPATIBILITY



Does it influence your choice of a peripheral/cerebral vasodilator*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective

1. For the relief of symptoms associated with cerebral vascular insufficiency
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

Supplied: Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

VASODILAN[®]

(ISOXSUPRINE HCl)
20-mg tablets

MeadJohnson PHARMACEUTICAL DIVISION

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**When painful spasm
is the presenting
symptom...**



...in the functional bowel/irritable bowel syndrome*

Bentyl®

(dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity
with minimal anticholinergic side effects†

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

Merrell

Bentyl®

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective.

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg capsule and syrup: Adults: 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children: 1 capsule or teaspoonful syrup three or four times daily. Infants: ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg: Adults: 1 tablet three or four times daily. Bentyl Injection: Adults: 2 ml (20 mg) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE. MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Switzwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

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Required Reporting by Physicians

By John T. Mooresmith
General Counsel, MASA

Any physician or osteopath holding a certificate of qualification to practice medicine or osteopathy in the state of Alabama is required to report to the Alabama State Board of Medical Examiners any information which the physician or osteopath has which appears to show that any other licensed physician or osteopath is guilty of any of the acts, offenses or conditions set forth as grounds for disciplinary conduct in the medical practice act. This is mandated by Section 34-24-92 (b) of the Code of Alabama, 1975.

This statutory mandate operates in conjunction with the disabled physician provision of the medical practice act to grant immunity to physicians who report their impaired colleagues to the Alabama State Board of Medical Examiners. The authority behind this immunity is founded on the absolute immunity granted to statements made in connection with a judicial proceeding.¹ This privilege extends also to the proceedings of the administrative boards so far as they have powers of discretion in applying the law to the facts which are regarded as judicial or "quasi-judicial" in character.²

The acts, offenses or conditions which must be reported are:

(1) Fraud in applying for or procuring a certificate of qualification to practice medicine or osteopathy in the state of Alabama;

(2) Practicing medicine or osteopathy in such a manner as to unwarrantably endanger the health and safety of the patients of the practitioner;

(3) Conviction of a felony;

(4) Conviction of any crime or offense which reflects the inability of a practitioner to practice

medicine with due regard for the health and safety of his patients;

(5) Conviction for any violation of a federal or state law relating to controlled substances;

(6) Receipt of fees on the assurance that a manifestly incurable disease can be effectively arrested or permanently cured;

(7) Willful disclosure of any confidential patient-doctor information unless excused by the patient involved or required by the laws of Alabama;

(8) Any violation of the principles of medical ethics as set forth in the opinions and reports of the Judicial Council of the American Medical Association;

(9) Gross malpractice or repeated malpractice or gross negligence in the practice of medicine;

(10) Advertising himself or his practice, whether through newspaper or periodicals, or by circulars, or otherwise, in such a manner as tends to deceive or mislead the public in matters pertaining to health;

(11) Soliciting patients or employing any person to solicit patients for him;

(12) Permitting or allowing any person to use his license or certificate to practice medicine;

(13) Aiding or abetting the practice of medicine by any person not licensed by the Board;

(14) Using his name under the designation "Doctor," "Dr.," "D.O." or "M.D." or any similar designation with reference to the commercial exploitation of any goods, wares or merchandise;

(15) Making a fraudulent Medicare or Medicaid claim or a fraudulent claim to any third party payor;

(16) The suspension or revocation by another state of a license to practice medicine, based upon acts of the licensee similar to acts described in this Section;

(17) Being unable to practice medicine or osteopathy with reasonable skill and safety to patients by reason of illness, inebriation, excessive use of drugs, narcotics, alcohol, chemicals or any other substance, or as a result of any mental or physical condition.

As stated earlier, there is a statutory mandate on licensed physicians and osteopaths to report any information they have which appears to show that any other licensed physician or osteopath is guilty of any of the acts, offenses or conditions set out above. Any physician or osteopath making such a report to the Alabama State Board of Medical Examiners should be entitled to an absolute immunity for making the report.

References

1. Beggs v. McCrea, 70 N.Y.S. 864 (1901); Buschbaum v. Heriot, 63 S.E. 645 (1909); Ginsburg v. Halpern, 118 A.2d 201 (1955)
2. Liniger v. Knight, 226 P.2d (1951); Rainier's Dairies v. Raitan Valley Farms, 117 A.2d 889 (1955); Robertson v. Industrial Insurance Company, 75 So.2d 198, 45 A.L.R. 2d 1292 (1954)

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BRIEF SUMMARY OF PRESCRIBING INFORMATION

ANTIMINTH® (pyrantel pamoate) ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions: Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

More detailed professional information available on request.

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Antiminth[®]
(pyrantel pamoate)

equivalent to 50 mg pyrantel/ml
ORAL SUSPENSION



a drug of choice in
pinworm infections

Please see brief summary of prescribing information on facing page.

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ALDOMET[®]
(METHYLDOPA/MSD)

TABLETS: 500 mg, 250 mg, and 125 mg

May & June, 1979 Meetings

- May 2-3 **Connecticut State Medical Society**
Hartford Hilton Hotel
Hartford, Connecticut
- May 2-5 **Medical & Chirurgical Faculty of the State of Maryland**
Hunt Valley Inn
Hunt Valley, Md.
- May 3-5 **Oklahoma State Medical Association**
Williams Center
Tulsa, Oklahoma
- May 3-6 **Texas Medical Association**
Dallas, Texas
- May 3-6 **Kansas Medical Society**
Holiday Inn-Holidome
Hutchinson, Kansas
- May 3-6 **North Carolina Medical Society**
Pinehurst Hotel
Pinehurst, North Carolina
- May 4-6 **Michigan State Medical Society**
(House of Delegates)
Kalamazoo Center Inn
Kalamazoo, Michigan
- May 6-10 **Mississippi State Medical Assoc.**
Biloxi Hilton
Biloxi, Mississippi
- May 10-12 **Wisconsin State Medical Society**
Marc Plaza
Milwaukee, Wisconsin
- May 16th **Rhode Island Medical Society**
Biltmore Plaza Hotel
Providence, Rhode Island
- May 17-18 **Minnesota Medical Association**
St. Paul, Minnesota
- May 23-27 **Florida Medical Association**
The Diplomat Hotel
Hollywood, Florida
- June 6-8 **Alaska State Medical Association**
Shee Atika
Sitka, Alaska
- June 7-10 **South Dakota State Medical Assoc.**
Howard Johnson
Rapid City, South Dakota
- June 16-19 **Maine Medical Association**
Samoset Resorts
Rockport, Maine
- June 18-20 **Iowa Medical Society**
Tan-Tar-A Resort
Osage Beach, Missouri
- June 27 **Chicago Medical Society**
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- Fast — only seconds to perform — can be read in 48-72 hours.



Precautions: Tuberculin testing should be done with caution in persons with active tuberculosis. However, activation of quiescent lesions is rare.

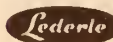
Although clinical allergy to acacia is very rare, this product contains some acacia as a stabilizer and should be used with caution in patients with known allergy to this component. Reactivity to the test may be suppressed in patients who are receiving corticosteroids or immunosuppressive agents, or those who have recently been vaccinated with live virus vaccine such as measles.

With a positive reaction, further diagnostic procedures must be considered. These may include x-ray of the chest, microbiologic examinations of sputa and other

specimens, and confirmation of the positive TINE TEST using the Mantoux method. In general, the TINE TEST does not need to be repeated. Antituberculous chemotherapy should not be instituted solely on the basis of a single positive TINE TEST.

Adverse Reactions: Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons. Pain, pruritus and discomfort at the test site may be relieved by cold packs or by a topical glucocorticoid ointment or cream. Transient bleeding may be observed at a puncture site and is of no significance.

Reference: Diagnostic Standards and Classification of Tuberculosis. National Tuberculosis and Respiratory Disease Association, N.Y. 1969.



LEDERLE LABORATORIES DIVISION, American Cyanamid Company, Pearl River, New York 10965

7% of the population may be harboring latent or dormant tuberculosis*

Are you testing for it during
routine office physicals?

*Based on a national estimate of 15 million tuberculin reactors
Stead, W.W. and Bates, J., in Harrison's Principles of Medicine,
8th Edition, 1977, McGraw-Hill, p. 900.



Committee of Public Health

The State Committee of Public Health took the following actions at its meeting on April 18, 1979:

- Received for study and consideration at the May meeting the Regulations Governing the Manufacture, Preparation, Display and Service of Foods, Confections and Beverages along with comments from public hearings which have already been held.
- Received for information a reply from EPA regarding radioactive materials in concrete block advising of a study by Task Force of interested agencies at all levels who are currently gathering information and making a study regarding health effects.
- Received a State Health Planning and Development Agency Policy Statement on National Guidelines for Health Planning which has been circulated to HSAs, DHEW and the Statewide Health Coordinating Council.
- Received the State Administrative Program: Application for Full Designation as the State Health Planning and Development Agency. Concurred in this proposal and requested support from the Governor for designation of the State Board of Health as the official State Health Planning and Development Agency for Alabama. Received testimony from the public hearing on April 12 on this application.
- Noted that the Procedures Manual for Revisions of Section 1122, dated Sept. 18, 1973, and revised Sept. 20, 1978, is submitted for study and consideration at the May 16 meeting of the State Committee of Public Health.
- Approved with favorable findings and recommendations the application of Selma Nephrology Referral Center, Selma, for a 10-station renal dialysis facility and made adverse findings and recommendations for the Selma Dialysis Center, Selma, for a 6-station dialysis facility supporting the recommendations of the Southwest Alabama Health Planning Council.
- Made adverse findings and recommendations for the University Medical Center, Montgomery, for a 75-bed addition in support of the recommendation of the Health Systems Agency's recommendation since this was not in conformity with the current Medical Facilities Plan.
- Gave favorable findings and recommendations to Children's Hospital, Birmingham, for a renovation and expansion of the existing hospital in support of the Birmingham Regional Health Systems Agency.
- Approved recommendations of the State Emergency Medical Services Advisory Board for application for 8 EMS services for intravenous fluids and/or drugs.
- Was advised of the appointment of Dr. Margaret Millsap to replace Dr. Laurene Gilmore as the Alabama State Nurses' Association representative to the Council on Prevention of Disease and Medical Care for a 5 year term.
- Approved a 1 year extension beyond the compulsory retirement age for Dr. J. B. Stapleton, Health Officer in Houston County.
- Received a narrative copy of the Summary Annual Report of the Health Officer to the State Board of Health.

Tenuate®
(diethylpropion hydrochloride NF)

Tenuate Dospan®
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATION: Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

CONTRAINDICATIONS: Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychological dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

PRECAUTIONS: Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

ADVERSE REACTIONS: **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecostasia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agranulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

DOSE AND ADMINISTRATION: Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

OVERDOSAGE: Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.
Cayey, Puerto Rico 00633

Direct Medical Inquiries to

MERRELL-NATIONAL LABORATORIES

Division of Richardson-Merrell Inc.

Cincinnati, Ohio 45215, U.S.A.

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hogkenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

Merrell

**Whether overweight is a
complicating factor...
or just uncomplicated overweight.**

Tenuate[®] Dospan[®] ^{IV} **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.¹ And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."² Compared with the amphetamines, diethylpropion has minimal potential for abuse.

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J-6999-4

April 1979

In Edema* or Hypertension* when
potassium balance is a concern...

Potassium-Sparing DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene)
and 25 mg. of hydrochlorothiazide.

Makes Sense

In Edema

The triamterene in 'Dyazide' limits potassium loss and provides an additive diuretic effect to that of the hydrochlorothiazide component.

In Hypertension

As the hydrochlorothiazide in 'Dyazide' lowers blood pressure, the triamterene component limits potassium loss.

Serum K⁺ and BUN should be checked periodically

particularly in the elderly, diabetics, and those with suspected or confirmed renal insufficiency (see Warnings). If hyperkalemia develops, substitute a thiazide alone.



Before prescribing, see complete prescribing
information in SK&F Co. literature or PDR. A
brief summary follows:

* WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K⁺ frequently; both can cause K⁺ retention and elevated serum K⁺. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Anti-hypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

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Carolina, P.R. 00630



EMPIRIN[®] COMPOUND c CODEINE

Each tablet contains: aspirin, 227 mg; phenacetin, 162 mg; and caffeine, 32 mg, plus codeine phosphate in one of the following strengths: #4—60 mg (gr 1); #3—30 mg (gr ½); #2—15 mg (gr ¼); and #1—7.5 mg (gr ⅛). (Warning—may be habit forming)



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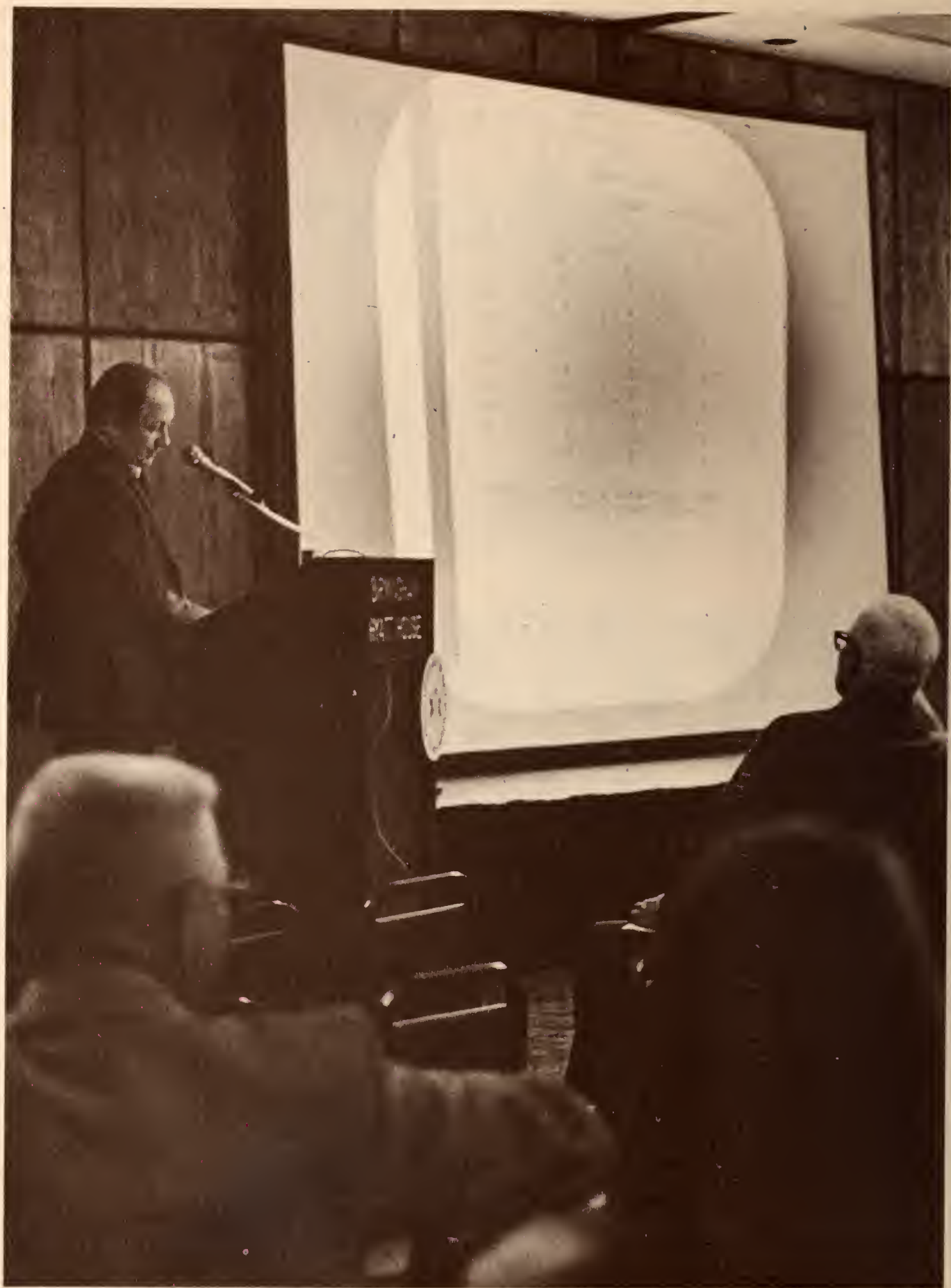
1979

Annual Session

On the following pages are general and particular views, with no pretense of order, of the 1979 annual session of MASA in Birmingham.

The accounts of any event will vary according to the observer. Admitting then, that a certain amount of arbitrary selection figured in what the subjective photographer saw and what the subjective editors saw in laying out these pages, the scenes are at least as valid as those of another observer, who might have seen the 1979 happening from an entirely different point of view.









Tom E. Nesbitt, M.D., President of the American Medical Association, looks over his audience of new members of MASA at the annual session in Birmingham.

An eloquent Tennessean, Dr. Nesbitt spoke on medicine in the 1980s, its challenges and its dangers.

The fold-out page to the right shows him before his Alabama audience. On the reverse side, Luther L. Hill, M.D., Montgomery, 1979-80 MASA President, addresses the same group of new physicians.

It is this linking of local, state and national groups of physicians that enables American medicine to be heard nationally, the collective voice of many thousands of physicians in private practice, from the smallest towns to the halls of Congress.







Leon C. Hamrick, M.D., Chairman of the Board of Censors, spoke to the Orientation audience on the functions of the Board, and those of the Board of Medical Examiners and the State Committee of Public Health.



It was through the persistence of 1978-79 MASA President Hiliary H. Henderson Jr., M.D., that Dr. Nesbitt was persuaded to attend the Birmingham annual session. For months, Dr. Henderson refused to accept the AMA President's packed schedule as an acceptable reason not to come to his sister state of Alabama. Dr. Henderson is shown introducing Dr. Nesbitt.

A. Derrill Crowe, M.D., President of Mutual Assurance Society of Alabama, told new member physicians about the professional liability insurance company he serves, created to fill the vacuum created by the withdrawal of other underwriters from this and other states.

Widely regarded as perhaps the most successful and forward-looking of all the physician owned companies in the nation, Mutual Assurance is a permanent institution making positive contributions to the membership in risk management, tort reform advocacy and other programs.





A highly regarded feature of the 1978 annual session in Huntsville was the speech by E. Vernon Stabler, M.D., past president of MASA.

Widely reprinted and often quoted, Dr. Stabler's "Advice to Young Physicians" became almost a must to be repeated at the 1979 annual session in Birmingham.

By special request of President Luther Hill, Dr. Stabler gave his talk again, repeating his eloquent insistence on physician standards of probity and integrity far above any other calling and warning the young doctors in his audience of the implacable odds that many of them would fall victim of drugs, alcohol and other manifestations of impairment.



The title of U.S. Senator Donald Stewart's speech was "Role of the Federal Government in Health Care," but as the television cameras rolled, he used the occasion to again outline his plan for a new rural health program in Alabama. He was courteously received, but some members of the audience questioned the perceived need for still another health care initiative.



The Auxiliary of MASA is always in the forefront of auxiliaries across the nation, this year producing the President of the AMA Auxiliary, Mrs. Benjamin H. Johnson, Jr., Bessemer. At right is the new state President for 1979-80, Mrs. Eugene H. Bradley, Centre. Below right is the 1978-79 President, Mrs. Aubrey E. Terry, Russellville. Other activities of the Auxiliary, included business sessions, presenting checks to the medical schools at Birmingham, Huntsville and Mobile (Dean James A. Pittman, Jr., UAB, is shown receiving his from Mrs. Donald J. O'Brien, Auxiliary chairman of AMA-ERF), auctioning a rug, work and fun.







The Samuel Buford Word Award went to Thomas M. Boulware, M.D., Birmingham, (left), presented by President Hiliary H. Henderson Jr., M.D.

The William Crawford Gorgas Award went to the Rev. Byron White (left), Berry, Ala.



Frederick S. Wolfe, M.D., Montgomery (left), receives the William Henry Sanders Award.



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- See following page for brief summary

PRONESTYL® TABLETS

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The prolonged administration of procainamide often leads to the development of a positive anti-nuclear antibody (ANA) test with or without symptoms of lupus erythematosus-like syndrome. If a positive ANA titer develops, the benefit/risk ratio related to continued procainamide therapy should be assessed. This may necessitate considerations of alternative anti-arrhythmic therapy.

DESCRIPTION: Pronestyl (Procainamide Hydrochloride) is the amide analogue of procaine hydrochloride and is available for oral administration as veneer-coated tablets providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride.

CONTRAINDICATIONS: In patients with myasthenia gravis and where a hypersensitivity to procainamide exists; bear in mind cross sensitivity to procaine and related drugs. Should not be given to patients with complete atrioventricular heart block. Contraindicated in cases of second degree and third degree A-V block unless an electrical pacemaker is operative.

PRECAUTIONS: Evidence of untoward myocardial responses should be carefully watched for in all patients. In the presence of myocardial damage with atrial fibrillation or flutter, the ventricular rate may increase suddenly as the atrial rate is slowed; adequate digitalization reduces but does not abolish this danger. Ventricular tachysystole is particularly hazardous if myocardial damage exists.

The dislodgment of mural thrombi producing an embolic episode may occur in correcting atrial fibrillation due to the forceful contractions of the atrium.

Extreme caution is required in attempting to adjust the heart rate when ventricular tachycardia has occurred during an occlusive coronary episode or where the use of procainamide may result in additional depression of conduction and ventricular asystole or fibrillation as in second degree and third degree A-V block, bundle branch block, or severe digitalis intoxication.

Bear in mind when treating ventricular arrhythmias in patients with severe organic heart disease and ventricular tachycardia that complete heart block, which may be difficult to diagnose, may be present. Since asystole may result if the ventricular rate is significantly slowed without attainment of regular atrioventricular conduction, procainamide should be stopped and the patient re-evaluated.

In the presence of both liver and kidney damage, normal dosage may produce symptoms of over-dosage—principally ventricular tachycardia and severe hypotension.

A syndrome resembling lupus erythematosus has been reported with oral maintenance procainamide therapy. Common symptoms are polyarthralgia, arthritis and pleuritic pain. Fever, myalgia, skin lesions, pleural effusion and pericarditis may also occur. Rare cases of thrombocytopenia or Coombs-positive hemolytic anemia, possibly related to this syndrome, have been

reported. Measure anti-nuclear antibody titers at regular intervals in patients on procainamide for extended periods of time or in whom symptoms suggestive of lupus-like reaction appear; in event of rising titer (anti-nuclear antibody) or clinical symptoms of LE, assess the benefit/risk ratio related to continued procainamide therapy (see boxed Warning). Steroid therapy may be effective if discontinuation of procainamide does not cause remission of symptoms. If the syndrome develops in a patient with recurrent life-threatening arrhythmias not otherwise controllable, steroid-suppressive therapy may be used concomitantly with procainamide.

ADVERSE REACTIONS: Hypotension is rare with oral administration. Serious disturbances of cardiac rhythm such as ventricular asystole or fibrillation are more common with I.V. administration.

Large oral doses may sometimes produce anorexia, nausea, urticaria, and/or pruritus.

A syndrome resembling lupus erythematosus has been reported in patients on oral maintenance therapy (see Precautions). Reactions consisting of fever and chills have been reported, including a case with nausea, vomiting, abdominal pain, acute hepatomegaly, and a rise in serum glutamic oxaloacetic transaminase following single doses of the drug. Agranulocytosis has been occasionally reported following repeated use of the drug, and deaths have occurred. Therefore, routine blood counts are advisable during maintenance procainamide therapy; and the patient should be instructed to report any soreness of the mouth, throat or gums, unexplained fever or any symptoms of upper respiratory tract infection. If any of these symptoms should occur and leukocyte counts indicate cellular depression, procainamide therapy should be discontinued and appropriate treatment should be instituted immediately. Bitter taste, diarrhea, weakness, mental depression, giddiness, psychosis with hallucinations, and hypersensitivity reactions such as angioneurotic edema and maculopapular rash have been reported.

For full prescribing information, consult package insert.

HOW SUPPLIED: Pronestyl Tablets (Procainamide Hydrochloride Tablets) providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride are available in bottles of 100 and Unimatic® single-dose packaging in cartons of 100. The 250 mg and 500 mg tablets are also available in bottles of 1000.



SQUIBB

'The Priceless Ingredient of every product is the honor and integrity of its maker.'™



Past President John B. McFerrin Rice, Jr., M.D. (left) receives the Distinguished Service Award from Board of Censors Chairman Leon C. Hamrick, M.D., for service on the Board.

1979-80 President Luther L. Hill, M.D., receives his 50-year award.



Past President Vernon L. Stabler, M.D. is honored for 50 years of service to medicine.

H. Henderson, Jr., M.D. (right) passes the President's gavel to Dr. Hill.





The press conference is a fact of life for medical association officials at the local, state and national levels—and few, if any, holds are barred. The TV camera looms as an all-seeing eye, microphones pick up every response, and getting “mugged” by newspaper photographers is standard procedure. An ordinary hotel room at the Birmingham Hyatt House served as the press room at the 1979 annual session, where these pictures were taken.





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Indications: For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

Contraindication: Previous hypersensitivity to penicillin.

Warnings: Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies

before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin.

[102175]

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Salutensin contains the recommended effective doses of both its components, requiring minimal titration.

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Salutensin contains Saluron (hydroflumethiazide), an intermediate-acting thiazide diuretic, which works over an 18-24 hour period, ideal for once-daily therapy.

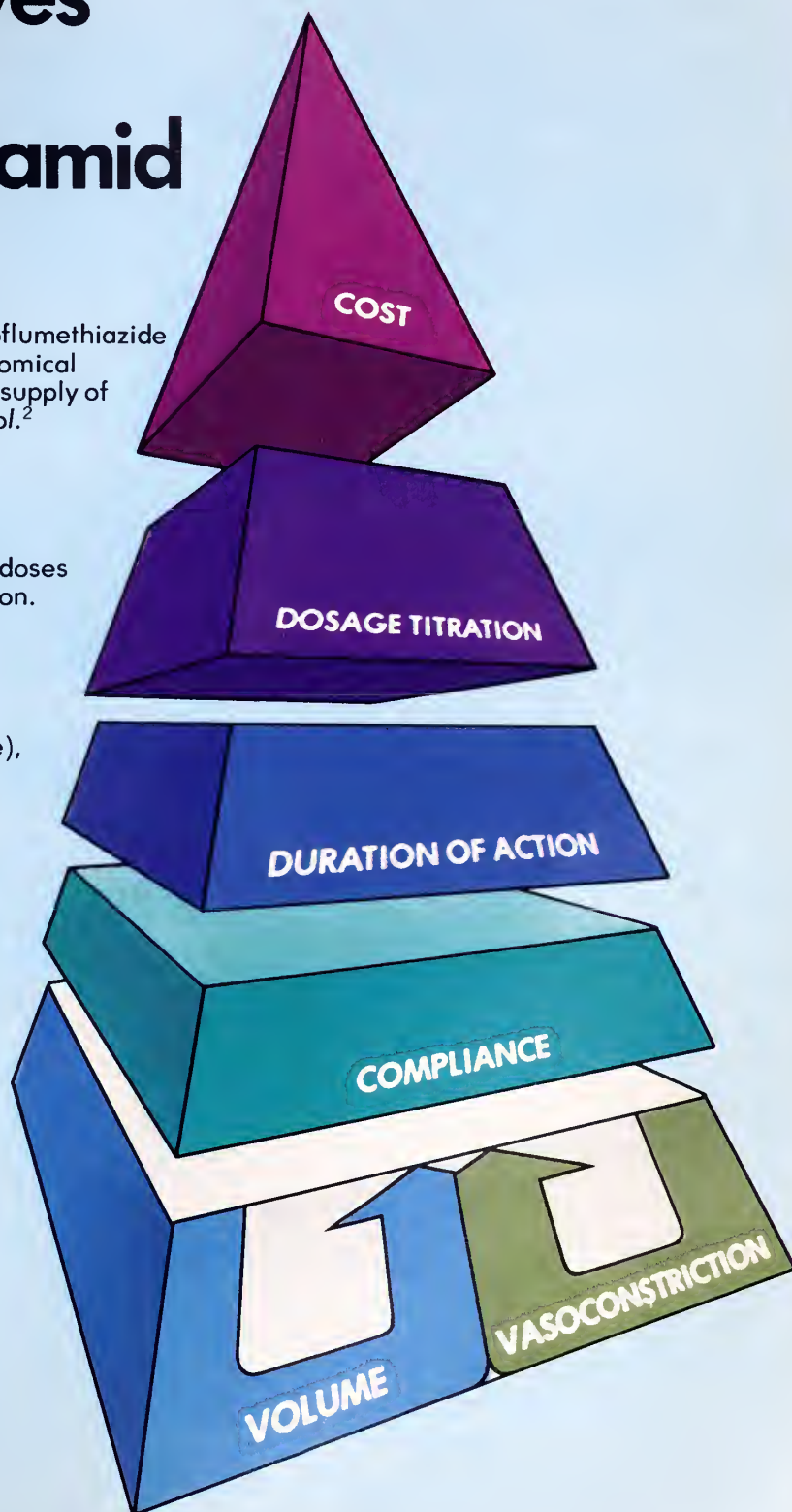
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The total daily dose can be given once a day. Compared with multiple-daily-dosage medications, the chance of a missed dose is greatly reduced.

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At the foundation of "step two" hypertension therapy, control of both circulating volume and peripheral resistance can be effectively achieved with the combination tablet Salutensin one day at a time.

References: 1. Finnerty, F.A. et al.: Step 2 Regimens in Hypertension, J.A.M.A. 241:579, 1979.
 2. Red Book 1979.



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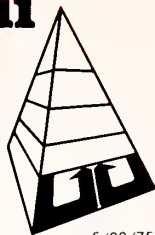
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5/20/75

Saluron® (hydroflumethiazide)

For complete information consult Official Package Circular.

CONTRAINDICATIONS: Patients with anuria, oliguria, or hypersensitivity to this or other sulfanamide derived drugs.

WARNINGS: Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in pregnancy: Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing mothers: Thiazides cross the placental barrier and appear in cord blood and breast milk.

PRECAUTIONS: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity. Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy. Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS:

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

USUAL DOSE: The average adult diuretic dose is 25 to 200 mg. per day. The average adult antihypertensive dose is 50 to 100 mg. per day. Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

HOW SUPPLIED: Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

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(12) 10/27/78

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in pregnancy: Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precoma hepatic cirrhosis. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being pre-diabetic should be kept under close observation if treated with this agent.

ADVERSE REACTIONS: Hydroflumethiazide: Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE: 1 tablet b.i.d.

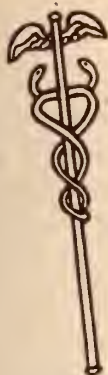
HOW SUPPLIED: Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

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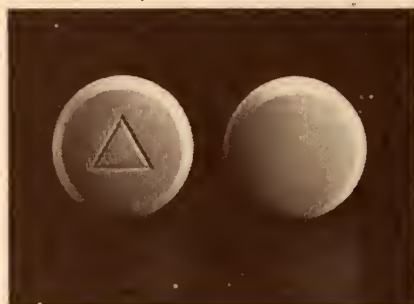
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The Maker

Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.



MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were

not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

MYTH: Industry favors only "expensive" brand names and denigrates all generics.

FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.

Matters.

MYTH: Generic options almost always exist.

FACT: About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.

FACT: Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal “help,” such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.



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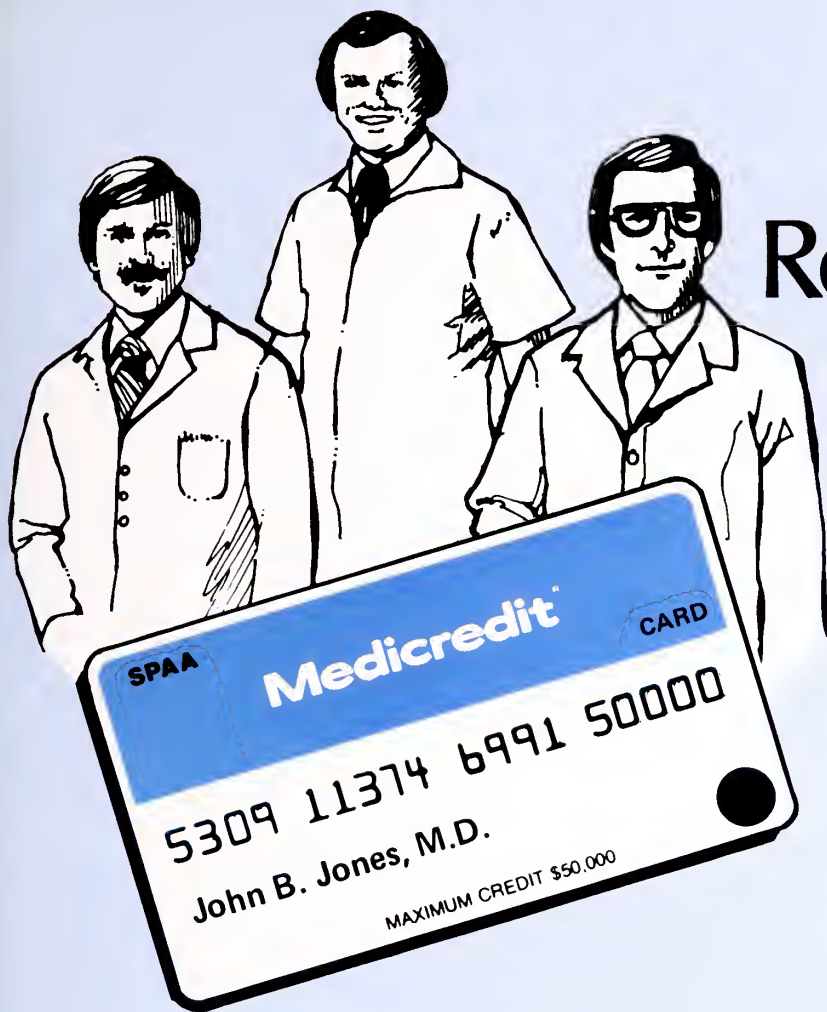
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Dean's Report

A Rural Health Care Network

William R. Willard, M.D., Dean*

On July 27, 1978 the Henry County Medical Society met in Abbeville to discuss topics of mutual concern among its members and to engage in a continuing education activity. As such this meeting was not a unique event for the three-member Society is active and meets on a regular basis.

What was unique about this meeting was the composition of the participants: several faculty and family practice residents from the College of Community Health Sciences at The University of Alabama, the three members of the Medical Society, and 20 nursing and allied health personnel from Henry County. Each had come to the Society meeting to participate in a continuing medical education program entitled "Birth Control Update" conducted by Dr. William Freeman, Assistant Professor of Obstetrics and Gynecology at the College of Community Health Sciences.

"Birth Control Update" was the first among many medical education topics presented to physicians throughout Alabama in a series of special programs offered by the College of Community Health Sciences. The Programs are unique because both the location of the meetings and the topics discussed are selected by the physicians who attend. Funded by a grant from the Reid-Provident Laboratories of Atlanta,

Georgia, the programs have served county medical societies, hospital medical staff, government agencies serving Alabama populations, and a variety of allied health care professionals. While this outreach program meets only a small portion of the total CME need in Alabama it demonstrates the College's concern for the needs and interests of Alabama physicians, especially those in rural areas.

The 23 programs conducted to date have been directed specifically at individuals or groups requesting them from rural areas, from Limestone County in the north, to Escambia County in the south, to Chambers County in the east, and Marion County in the west. For example, the content of the Abbeville program and its application to medical, nursing, and allied health personnel was requested by Dr. William Creel, President of the Henry County Society. The programs are free to requesting groups or individuals and have served to complement the ongoing activities of societies or groups, or, in some cases, have served as lead-off activities in the reactivation of societies or groups.

Difficult Selection

The selection of a program in continuing medical education is difficult for most physicians to make for themselves. Out-of-town meetings, unknown organizations, and unknown type or amount of CME credit are variables that must constantly be considered and weighed against potential benefits.

Physicians in rural areas experience these problems, but they have special

problems too which require special solutions. Often physicians who most need or want continuing education cannot attend or do not attend because of one or more reasons:

1. The lack of communication between the University medical center and rural physicians within its sphere of influence;
2. the difficulty of attending meetings for physicians who are in practice alone or in communities with few other physicians;
3. the distance physicians must travel to attend courses;
4. the frequent failure of CME courses to meet their needs;
- and 5. the varying motivation of physicians to seek continuing education.

The College's outreach program providing CME "house calls" for rural physicians represents a tangible, successful answer to many of these difficulties.

Just as physicians providing services in rural areas confront special problems that require special solutions, so too do rural populations confront special problems of their own which require special solutions. Because fully 66% of the membership of MASA is located in the largest urban areas of the state it may be worthwhile to summarize some of the characteristics and special problems endemic to rural Alabama.

Much of this information may not be new; indeed, many of the characteristics may be quite familiar to most Alabamians. It is the persistence of these characteristics, however, that requires special attention.

In Alabama only 36% of the population lives in the six urban areas which

* College of Community
Health Sciences
The University of Alabama
P. O. Box 6291
University, Alabama 35486

have populations over 60,000. Furthermore, while 31 of Alabama's 67 counties have populations of less than 25,000, the rural counties have a land mass greater than Massachusetts, New Hampshire, Rhode Island, Delaware, Connecticut and New Jersey combined. This means that many families are separated by miles from those services that might otherwise be available, a geographical barrier as well.

Added to these is a practical barrier: only eight counties have a good physician-population ratio. In the remaining counties the ratio averages 2,963 persons per physician, less than one-third as many physicians per thousand population as the nation as a whole enjoys. Alabama has proportionately more counties designated as presently short of physicians and health care professionals than any other state.

The lack of medical manpower and other health resources is reflected in part by other vital statistics describing the state. Alabama has one of the highest infant mortality rates in the nation; a high rate of developmental disabilities; tuberculosis (a largely preventable disease today) is relatively prevalent; and the cardiovascular disease mortality is comparatively high.

These and other problems affecting the health of rural Alabamians cannot be confronted as single problems, however. It is essential that recognition be given to the interrelationships among medical problems, health care delivery systems, and consumer awareness, to name just a few variables. For example, it is difficult to lower the infant mortality rate without dealing with maternal health and the interrelationships of nutrition, teenage pregnancy, alcohol and drug abuse, and general health education and applied concepts of self-care, among others. It is difficult to lower the tuberculosis rate or the death rate from heart disease without periodic examinations and early diagnosis. It is difficult to lower the incidence of heart disease without health health education and community activities that encourage the adoption of new and healthier lifestyles.

These special characteristics and problems of rural Alabama dictate that a comprehensive, interrelated network of health care services be developed

and implemented. With the aid of such a network special problems could be analyzed on a community by community basis and recommendations made and implemented within the context of the individual community, the point at which all change and improvement must originate.

The College of Community Health Sciences, as part of The University of Alabama System Medical Education Program, is contributing to the development of such a network for rural Alabama. The continuing education program mentioned previously is part of that network. Other elements include the following: 1. the education and training of health manpower, especially physicians for primary or family health care who are motivated to serve in the areas of need; 2. research programs directed at the study of health problems which will develop strategies for the solutions of problems and then demonstration programs to test the validity of the proposed solutions; 3. specialized services developed for the rural areas of the state, providing essential services which cannot otherwise be obtained; 4. a coordinated approach to health resources and services in the state; 5. a recruitment/placement service for physicians and other health personnel to help communities in recruiting needed care professionals; and 6. a continuing education program for all types of health care personnel. Some programs relating to these elements are already in place and functioning. Others are developing. Still others are in the planning process. A brief description of each of the major elements might serve to indicate the nature of the comprehensive network which, when fully operational, will be focusing its efforts directly on rural Alabama.

Manpower

Despite the fact that 70% of Alabama's population is considered rural, relatively few students from rural areas have had the opportunity to matriculate in medical schools. Further, despite the fact that research has shown that students from rural areas tend to practice in rural areas after graduation, these students have consistently scored poorly on pre-admissions tests. To address this problem the College and The University of

Alabama are initiating a program that will include three separate but inter-related components: an enrichment experience, a remedial experience and an experiential learning experience, each focusing on the 10th, 11th and 12th grades of high school. The program will use independent study packages and the resources of the University to provide students both at-home as well as on-campus learning opportunities. The program is intended to assist talented and motivated students to develop the background necessary to successfully enroll in a premedical or undergraduate health professions program.

The College's undergraduate medical education program provides the third and fourth year of clinical experiences for some of the University of Alabama School of Medicine students. The College's undergraduate medical school program parallels that of the School of Medicine, but also includes an additional focus on primary care and community medicine. By providing high quality, community-based medical education experiences and, by providing off-campus experiences in rural communities, the program hopes to attract medical students to practice in rural and underserved areas.

The College's most immediate contribution to the manpower needs of Alabama comes from its Family Medicine residency program. To date over 75% of the residents completing the program have established practices in Alabama. The number of post-graduate or residency positions in Family Medicine and other primary care disciplines must be increased throughout the state, however, if the pool of physicians prepared to practice in rural Alabama is to be increased to meet both current and projected needs.

The college also co-sponsors with the Colleges of Commerce and Business Administration and Arts and Sciences an undergraduate program in health care management, providing special opportunities for students in the program who are interested in participating in the management of clinics or other health facilities or agencies in rural areas. Additionally the College provides community-oriented clinical/experiential learning

opportunities for students from a variety of allied health professions.

These professional educational activities, when combined with those of the state's other health professions schools, represents steps in the right direction. Much more needs to be done in this area, however, if sufficient manpower is to be available for the comprehensive health care delivery system needed by rural Alabama.

Research in Health Care Delivery

If the health needs of rural Alabama are to be met there are innumerable problems associated with them that need to be studied and solved. Clear, consistent and valid health policies must provide the framework for approaching these problems. This is required not only at the federal level but also by Alabama's state and local governments and private institutions involved in health care and health care delivery. Such a framework can provide the basis for studying the health needs of rural Alabama. For example, how can group practices be organized and motivated to provide outreach services to nearby underserved areas? What causes some rural practices to fail? What steps can be taken to prevent this? What must communities do to attract and hold physicians? What alternative methods of delivering health care to areas of need can be developed?

Answers to these and similar questions and solutions to the problems they represent require the knowledge and expertise of many disciplines working together. The College of Community Health Sciences' program of research, focusing on these many problems, is being organized as an interdisciplinary unit within The University of Alabama.

To be effective, the program could be a major resource for the legislature, local governments and communities, as well as the West Alabama Health Systems Agency and the other health agencies of our state. This research program is intended to: (a) develop strategies aimed at improving the delivery of health care to rural and underserved areas of the state; (b) review health manpower needs and distribution; (c) engage in necessary studies to analyze health problems and resources, and establish priorities using the total resources of the University;

and (d) provide a focus for health policy development and program development.

Specialized Services

There is a number of health problems common to many Alabama citizens, but exacerbated for those living in rural areas. For example, many new drugs as well as old ones are potentially hazardous if improperly used or taken by accident. There are also many toxic plants and poisonous snakes and insects in Alabama, as well as toxic chemical being used in agriculture and industry. Few physicians, much less lay people, can be expected to know how to manage all the emergencies that arise from these sources.

Further, the isolation imposed by distance, the relative lack of sophisticated resources for physicians and widespread health education programs for populations in rural areas contribute additional complications. A resource providing authoritative information available at all times has opened recently. The West Alabama Poison Control Center, with its toll-free number (205/345-0600), coordinates its services with the developing Emergency Medical Service System of the West Alabama region to provide 24-hour advice and referrals to both physicians and lay persons concerning toxic substances.

With an increasing number and percentage of our population entering the senior citizen category, the often neglected problems and needs of the elderly are finally being recognized.

Communities need help in meeting the physical and mental health needs of their senior citizens. At the opposite end of the age spectrum is the care of the pregnant woman and her newborn infant in the high risk category. Maternal and infant mortality is unusually high in Alabama. It is largely preventable if the programs of both community services and regional centers are fully developed and integrated with one another. Beginnings have been made in attacking the problems associated with both age groups in rural West Alabama and other rural areas of the state, but much more needs to be done.

Coordination of Health Resources and Services in the State

Each region of the state has its own unique resources and problems, as well

as one or more health service programs. A cooperative network can provide administrative and coordinating mechanisms to capitalize on all existing resources, direct specific attention at specific problems, and develop new services as they are needed. This requires a consortium of educational institutions with health science programs, service agencies, and regional health planning organizations.

Each should have a linkage with the state's major medical centers and the expertise sponsored by the system can provide excellent settings for the field training of all kinds of health personnel; such settings provide one of the best devices for recruiting health manpower to the rural areas. Currently there are only a few settings in the state providing high quality, rural-oriented field training for students in the various health sciences programs. A state-wide consortium can provide educational approaches to solving the problems of health manpower distribution and health service availability and effectiveness. Other states have developed effective programs to achieve these goals. Alabama can do the same with the support of the medical profession.

Recruitment and Placement

Alabama needs an active program for recruitment of physicians and health personnel for its small-towns and rural areas in need. Graduates of health professions schools need guidance and encouragement in selecting suitable locations for practice. Communities need help in finding physicians and health personnel and in knowing how to organize and present themselves effectively. Many communities, in an attempt to attract physicians, build office buildings which stand idle for years. Many do not know what young physicians are looking for and feature the wrong things about themselves and their community as they are attempting to attract physicians.

The college has a physician placement program, not just for graduates of its own programs but for all available, qualified physicians.

Rural Alabama possesses special characteristics, and is confronted by special problems requiring special, specific solutions.

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Outstanding multi-hospital emergency group has excellent opportunities available in Greenville, Mississippi. Fly to Mississippi, work 6-16 shifts, spend the other 20 days in California. Fee-for-service. Malpractice insurance provided. No accounting, billing, or personnel problems. Contact: Garland Holloman, M.D., Delta Medical Center, 1400 E. Union Street, Greenville, Mississippi 38701 (601) 378-3783 or John Stein, 897 MacArthur Boulevard, San Leandro, California 94577 (415) 638-3979.

FP's, \$40,000 guarantee, moving, free rent, other; C.V. to Dr. R.E. Wiltzie, PO Box 57026, Birmingham, Ala. 35209.

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P. O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7445, evening hours 553-2198.

STUDENT HEALTH PHYSICIAN: Needed at Auburn University, where eight full time physicians provide primary care to 18,000 students from a modern, well equipped health care facility. Regular hours, ample leisure time, competitive salary, and all University fringe benefits plus paid malpractice insurance. Both nine and twelve month appointments available. Requirements: Medical degree, Alabama license prior to appointment, plus an interest in the special problems of young adults and the ability to communicate easily with them. Contact: D. W. Oleson, M.D., Medical Director, Drake Student Health Center, Auburn University, Auburn, Alabama 36830. (205) 826-4416. An equal opportunity employer.



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PHYSICIAN'S PLACEMENT SERVICE

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE: Age 31; University of Alabama, 1974; Board Eligible in Family Practice; seeking practice preferably in the southern part or on the coast. Available immediately. LW-02279.

GENERAL PRACTICE/OBSTETRICS & GYNECOLOGY: Age 59; Medical College of Alabama, 1954; American Board Eligible; seeking practice in multi-specialty group, single specialty group or partnership in a community of 25,000-99,999 population. Available. LW-14553.

GENERAL PRACTICE/OBSTETRICS & GYNECOLOGY: Age 59; Medical College of Alabama, 1954; American Board Eligible; seeking practice in multi-specialty group, single specialty group or partnership in a community of 25,000-99,999 population. Available. LW-14553.

GENERAL PRACTICE/PATHOLOGY: Age 39; Yonsei University, 1966; American Board Certified; seeking practice in general or specialty preferably in the central area in a middle sized town. Available immediately. LW-050179.

GENERAL SURGERY/GENERAL PRACTICE/EMERGENCY MEDICINE: Age 39; University of Madras, India, 1966; Board Eligible in General Surgery; seeking practice in general, specialty or emergency. Available July 1979. LW-050579.

INTERNAL MEDICINE/EMERGENCY MEDICINE: Age 33; Osmania University, 1972; Board Eligible in Internal Medicine. Available immediately. LW-050279.

INTERNAL MEDICINE/INDUSTRIAL MEDICINE: Age 56; University of Louisville, 1949; American Board Eligible; seeking practice in industrial or group practice. Available July 1, 1979. LW-050479.

OBTETRICS & GYNECOLOGY: Age 43; Medical College of Georgia, 1975; seeking practice in specialty, solo or group preferably in the coastal area. Available January 1980. LW-030479.

OBTETRICS & GYNECOLOGY: Age 30; Meharry Medical College, 1973; will be American Board Eligible in 1979; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1979. LW-13835.

OPHTHALMOLOGY: Age 28; Duke, 1976; seeking practice in Ophthalmology or Academic in a town of 75,000 plus population. Available January 1981. LW-02579.

PEDIATRICS/NEONATAL: Age 34; Howard University, 1972; American Board Certified; seeking practice in specialty preferably in the Birmingham area. Available July 1979. LW-030579.

PSYCHIATRY: Age 44; University of Toronto, 1959; American Board Certified; seeking practice in Psychiatry preferably in the southern section of Alabama. Available for practice in the near future. LW-02679.

ORTHOPEDIC SURGEON: Age 30; University of Tennessee, 1973; American Board Certified; seeking practice in specialty in a town with a population of 15,000 or greater. Available January 1980. LW-11478.

SURGEON/UROLOGICAL: Age 30; University of Alabama, 1974; American Board Eligible in 1979; seeking partnership, single

specialty group or solo. Available July 1979. LW-12031.

GENERAL SURGERY: Age 32; Case Western Reserve University, 1974; seeking practice in solo or group practice. Available July 1, 1979. LW-02879.

GENERAL SURGERY: Age 34; Temple University; 1969; American Board Certified; seeking practice in a town with a population of more than 50,000. Available November 1979. LW-02979.

GENERAL SURGERY: Age 29; University of Mississippi; seeking practice in Alabama. LW-02779.

SURGERY: Age 45; Tufts University, 1957; seeking assistant or associate practice in a town with a population over 50,000. Available December 1979. LW-020179.

PHYSICIANS WANTED (Opportunities for Practice)

PRIMARY CARE PHYSICIAN—Wanted to serve as Medical Director of a Primary Care Group Practice. Will be a Montgomery, Alabama hospital employee with the opportunity to develop the ideal Primary Care Group Practice. Moving expenses, salary, other fringe benefits. PW-030179.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

OPPORTUNITY for Surgeon, Family Practitioner, Internist, Pediatrician or Ob-Gyn in city of 10,000 population in trade area of 35,000 population, located 100 miles north-west of Birmingham. May begin as associate working with three other physicians or solo working with same doctors. Office space immediately available. Excellent location near mountain lakes, river, hunting, fishing, boating, golfing and nearby to Metropolitan Area. PW-14.

PEDIATRICIAN—Wanted to join an established and practicing pediatrician in opening a new office in an area adjacent to Birmingham in one of the most rapidly growing areas in the state. PW-04179.

OPPORTUNITIES FOR GENERAL PRACTITIONERS—

Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic are provided by residents of the family practice residency training program on a rotation basis. The clinic is in its third year of operation. The city is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.

Auxiliary



Mrs. Eugene H. Bradley
President, A-MASA

Looking Back at Birmingham

What could be nicer than being in Birmingham, April 18-20? Why naturally it was being at the Convention of the Auxiliary to the Medical Association of the State of Alabama at the Hyatt House!

With our AMASA Convention being planned by Mrs. George Scofield and Mrs. Aubrey King, our auxiliaries knew we were in for a very exciting program of "extra-curricula" activities. With Mrs. Aubrey Terry being President of AMASA, we knew the program and speakers would be most informative. We were not disappointed!

For me, the program began with the Pre-Convention State Executive Board Meeting. State Chairmen and Officers reported on the many activities of auxiliaries this past year to promote the cause of medicine across the state. That night we were invited to the home of Dr. and Mrs. Estock for a reception and dinner honoring our AMA Auxiliary President, Mrs. Manuel Bergnes.

Thursday started off bright and early with a Breakfast. Greetings were brought to us by Dr. Thomas H. Allen, President of Jefferson County Medical Society, Dr. Hilary H. Henderson, President of MASA, and Dr. Tom Nesbitt, President of AMA.

Mrs. Bergnes discussed plans, programs and activities being sponsored by AMA Auxiliary and stressed the benefits of being a member of this

organization. What a host of dignitaries to start the convention.

The opening session was given mostly to the reports of the county presidents. This is a vital part of our program because it is here that we hear what others are doing and have an exchange of ideas. After a full morning of work, we enjoyed being transported by bus to a luncheon at the home of Dr. and Mrs. Henry Darnell. After lunch, we boarded our buses and were graciously welcomed into the homes of Dr. and Mrs. S. Richardson Hill and Dr. and Mrs. David Comfort. How very much we out-of-towners do appreciate their courtesies. That evening, we enjoyed being with MASA members and wives at The Club.

Friday's session began with a talk by Dr. Doug Talbott on "Information Concerning Impaired Physicians' Program in Georgia." Mrs. Baxter S. Troutman, President of Southern Medical Auxiliary, also brought greetings.

The Noon Luncheon always honors our Past State Presidents. This is a time for us to pay tribute to their past Leadership which is invaluable to us. Among this illustrious group, we have 2 Past AMA Auxiliary Presidents, Mrs. W.G. Thuss, and Mrs. John Chenault, and President-Elect of AMA Auxiliary, Mrs. Ben Johnson, Jr. We are so fortunate to have them to help inspire and guide us in our work.

This is also the time we present our AMA-ERF checks to the Medical Colleges. Mrs. Gil Wideman was in charge of installation of state officers. I will give a summary of these officers in the next issue. The Post-Convention Executive Board Meeting officially closed the session.

AMASA joined MASA for the Annual Awards Dinner Friday night.

Saturday morning, I was honored to attend the meeting of the House of Delegates and College of Counsellors and to hear Mrs. Aubrey Terry so ably present the good report of AMASA's activities during this past year. A highlight of this report was the organization of two new county auxiliaries, Clay-Randolph and Winston. This was the result of hard work and much planning of many people but Mrs. Terry was the leader. She has served our organization very capably and has certainly inspired me to do my very best this next year.

Annie



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Indications and Usage: For the treatment of urinary tract infections due to susceptible strains of the following organisms: *Escherichia coli*, *Klebsiella-Enterobacter*, *Proteus mirabilis*, *Proteus vulgaris*, *Proteus morganii*. It is recommended that initial episodes of uncomplicated urinary tract infections be treated with a single effective antibacterial agent rather than the combination. Note: The increasing frequency of resistant organisms limits the usefulness of all antibacterials, especially in these urinary tract infections.

Also for the treatment of documented *Pneumocystis carinii* pneumonitis. To date, this drug has been tested only in patients 9 months to 16 years of age who were immunosuppressed by cancer therapy

The recommended quantitative disc susceptibility method (Federal Register, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers; infants less than two months of age.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. **Blood dyscrasias:** Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. **Allergic reactions:** Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. **Gastrointestinal reactions:** Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. **CNS reactions:** Headache,

peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. **Miscellaneous reactions:** Drug fever, chills, toxic nephrosis with oliguria and anuria, periarthritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for infants less than two months of age.

Urinary Tract Infections: Usual adult dosage—1 DS tablet (double strength), 2 tablets (single strength) or 4 teasps. (20 ml) b.i.d. for 10-14 days.

Recommended dosage for children—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. A guide follows:

Children two months of age or older

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
20	9	1 teasps. (5 ml)	½ tablet
40	18	2 teasps. (10 ml)	1 tablet
60	27	3 teasps. (15 ml)	1½ tablets
80	36	4 teasps. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	½ the usual regimen
Below 15	Use not recommended

***Pneumocystis carinii* pneumonitis:** Recommended dosage: 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10. Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole, fruit-licorice flavored—bottles of 16 oz (1 pint).



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From the Executive Director

The Dismal Science

130 years ago Thomas Carlyle coined a phrase destined to stick. He called economics "the dismal science."

The coinage was assimilated into the language, so that you can scarcely pick up a magazine or newspaper today without seeing the casual reference.

Except for the Great Depression of the 1930s, American economics has rarely been more dismal than today. Runaway inflation is a major part of it, one that has caused the constant erosion of everybody's dollars.

We tend to look at the problem in short, contemporary segments. Last year the purchasing power of the average American's dollar lost a little more than 9%, measured against 1977.

But in 1977 a dollar wasn't worth a dollar either. In fact, it was worth 50 cents of the 1967 dollar, having diminished by half in just one decade.

Go back even further, to 1940 say, and you find that the 1977 dollar (which actually looks pretty good to us here in mid-1979) was worth 20 cents. And that's the figure for the *average* American with *average* buying habits.

For other buyers, the ravages of inflation have cut far deeper and far wider. Hospital costs, for example. The buying power of the 1979 hospital dollar is a great deal less than half what it was in the 1960s when Medicare and Medicaid began to overheat one segment of American industry—the health care industry. Pouring more money into the industry created more demand—from people who had never used it before and from people who began to use it much more than they really needed to.

Overutilization and the pressure of federal dollars (which decreased in value every year) had the absolutely predictable effect of forcing costs up. There were other factors of course: Hospitals are uniquely both labor-intensive *and* capital-intensive. It takes a lot of people and a lot of high-technology to implement the life-saving wonders of modern medicine.

It is not even necessary to compare the cost of the first commercially available X-ray machine (\$50 in 1896) to the cost of the controversial medical marvel that is the CAT scanner (\$700,000 or more this year).

Irrespective of such capital investments as this and the many other machines that are saving hundreds and thousands of lives, labor and material costs have skyrocketed. Even cleaning women and others in menial but necessary jobs are making far more today. And all other hospital personnel—nurses, technicians, typists—must be paid ever higher wages because they have to live, eat, buy homes and automobiles like everyone else. And their cost of living surges out of sight.

The hospital industry is thus a pressure cooker, an analogy often used for any limited segment of the economy under peculiar stress. Most of the heat, one way or the other, comes from the federal government which supplies much of the money and directs how it should be spent; the

continued on page 4



Luther L. Hill, M.D.
President

The Canadian Experience

A Market Opinion Research Report, sponsored by the American Medical Association in November of 1978, on "The Need for National Health Insurance" states, "A majority of physicians—though a bare majority—now say there is such a need. This majority is made up of 40 percent who feel strongly there is a need and 13 percent who feel there is some need, but don't hold an intense feeling about that need."

Excellent quality medical care for everyone is an admirable objective that has universal appeal. It is an ideal condition that we are all striving for.

Comprehensive national health insurance has been advocated as guaranteeing its fulfillment. This is a false assumption. The experience of those countries having such a program prove this. The most recent convert to comprehensive national health insurance is our neighbor, Canada, and it would be profitable to review their experience. As would be expected, during the first few years after its adoption, there was progressively greater utilization of medical services. This was appreciated by everyone. However, the increased cost, due to inflation and increased utilization, became a burden that the public through their government became unable or unwilling to bear.

This resulted in curtailment and impairment of quality of services both in hospitals and by physicians. This applied to the under-privileged and the privileged.

In Ontario in 1971, there were 5.25 active treatment beds per 1,000 population. In 1973, this number had decreased to less than 5. In 1976, to 4.5 and the target is for 3.5 beds for 1,000 population. The average length of hospital stay for patients in the Ontario private and public hospitals in 1971 was almost 12 days. This had decreased to less than 10½ days by 1976. According to Mr. James A. McNab, President of Toronto General Hospital, "No major new program initiatives have been undertaken since 1975." He says the Province convincingly has told us it does not have the money. It is obvious that with a decrease in available hospital beds and a shortening in the length of hospital stay, there is bound to be a compromise in the quality of care.

The quality of the physicians' care is affected by the necessity for working longer hours and constantly rushing to see more patients. The physician, a conscientious person, is frustrated with the realization of the compromise in time and service given a patient.

The quality of the physicians' care is also compromised by his preoccupation with the anxieties of trying to maintain a comparable income. With continuing inflation and rigid

controls over available funds, the Physicians' income will become completely inadequate when compared with other professional groups.

Dr. Ed Moran, General Secretary of the Ontario Medical Association, said in his talk at the AMA Leadership Conference in February 1979, "It is pretty well conceded that doctors in Ontario have been rather badly abused financially in recent times."

"The premier of the Province has stated privately that doctors are underpaid and that he is concerned about it. An all-party committee of the Legislature (Our State Assembly) which deliberated for some months and reported on health care costs this past October, had this to say about physician's fees: 'These charges do not strike us as being adequate or even reasonable.' However, in spite of the above, in the most recent round of negotiations, the government spokesman signalled that the Government is unable to pay us what we are worth, has no intention of doing so, and why don't we be reasonable and talk about what the Government is able to pay?"

The central or more important reason why universal national health insurance will never be satisfactory for physicians is covered in Dr. Moran's next two sentences. "The big stumbling block, as I see it, is that government finds it politically unacceptable to appear generous to a group which symbolizes, if not reeks of affluence in the public's mind. Government knows we deserve more, they want to pay us more, but, in fact, they cannot."

Is it reasonable to expect any group to devote its undivided attention to any work, regardless of its nobleness, when it is absorbed in worry over sustaining its living standard?

"Would any reasonable person be surprised that the quality of physicians' care would be impaired by comprehensive national health insurance?"

Luther Will

continued from page 2

same government that raises minimum wages, starting yet another escalation of wage demands bottom to top. And so on.

Now the Carter administration says the nation has to put a cap on hospital costs. Not on any other segment of the overheated economy. Just hospitals. In other words, close the relief valve in this pressure cooker. Under this year's bill hospitals would be given until Jan. 1, 1980, to show that they can voluntarily hold down their cost increases. If they fail to keep their average annual increase to 9.7%, plus an adjustable figure, controls would go into effect.

Even Senator Kennedy admits that's a hopelessly unrealistic expectation. Just recently, his subcommittee on health increased that limit to 10.9%, which is still too low considering the unique pressures and demands placed on hospitals.

If hospitals can't pass on their ever rising cost of goods and services, or only a part of it, something has to give, obviously. And that something just might be a form of rationing of patient care, with an inevitable deterioration in quality.

It's easy enough for critics to say that the present ratio of 2.64 persons per hospital bed is too high. Where do they propose cutting? Lab personnel? X-ray? Food service? Nursing?

It's easy enough for them to say that intensive care units, and the machines and people in them, cost too much.

What do they want to eliminate and whose life have they decided is expendable?

They don't say. They just say cut somewhere and cut deep.

The dismal science is more dismal because politicians insist on restricting one part of the vast system of supply and demand without knowing or caring what effect it will have on the rest of a singular delicate system.

S. Lon

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Feedback on a Two-Year Clinical Program

Colin
Campbell, M.D.*

The 25 junior medical students who plan to matriculate at the UAH School of Primary Medical Care this fall will be the sixth group since 1974 who have come to Huntsville for their final two years of medical school.

That degree of continuity combined with the participation of this school in the recent reaccreditation process of the University of Alabama School of Medicine has stimulated some introspection about the students who chose to receive their clinical training in Huntsville and the quality of that training.

That they have chosen to come to the School of Primary Medical Care is the most significant fact about both full-time and short-term students here. The majority of those in the first two SPMC classes transferred from two-year medical schools in other states. As the enrollment in the first two years at the UA School of Medicine in Birmingham has expanded, more juniors have been available to enter the programs in Tuscaloosa and Huntsville.

*Dean

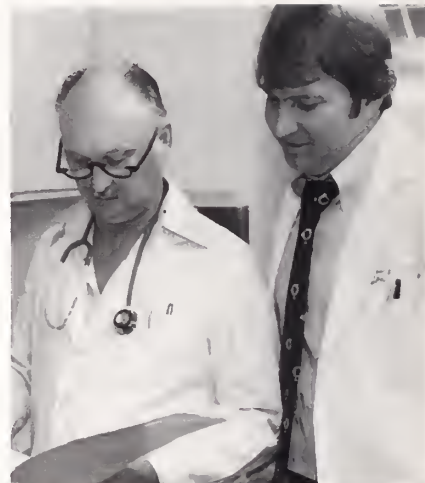
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School of Primary Medical Care
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It is anticipated that by the fall of 1980, the entering junior class and all subsequent classes at the UAH School of Primary Medical Care will be drawn entirely from students at the Birmingham campus. The LCME accreditation team that visited the three campuses of the UA School of Medicine in January has recommended to the Liaison Committee on Medical Education that the class size at the Huntsville campus be increased from 22 to 25 and that the Executive Dean of The University of Alabama System Medical Education Program (UASMEP), Dr. James Pittman, be authorized to allow as many as 30 students per year to complete their medical school careers at the School of Primary Medical Care.

Two Reasons

Whether medical students elect Huntsville for their entire clinical training or just for one or more core rotations or electives, they seem to come primarily for two reasons: the favorable faculty-student ratio (often one-to-one) and the large amount of direct patient-care experience we are able to provide in both hospital and ambulatory care settings. By the end of the 1978-79 academic year, in addition to our full-time students, another 66 students will have come to Huntsville since 1973 as guest students from not only the main campus in Birmingham, but also from the School of Medicine at the University of South Alabama and from several medical schools out of state. Half will have come to SPMC for electives and the other half for core clinical clerkships in internal medicine, pediatrics, surgery, and obstetrics/gynecology.

Since the process of formal medical education is so long it is too early in



Randall Hall, SPMC 1979, assists his Rural Preceptor Dr. Robert Rhyne in examining a patient in Dr. Rhyne's Moulton, Alabama office.

this school's life to assess with certainty how well we are succeeding in training competent, caring physicians. We do know that medical students throughout the University of Alabama System Medical Education Program, including full-time students at SPMC, perform at or above the national mean on the Part II Examination of the National Board of Medical Examiners.

Six of the 68 students in our four graduating classes, including this year, have been elected to Alpha Omega Alpha while at the School of Primary Medical Care; one additional AOA member was elected before matriculating in Huntsville. All 68 University of Alabama School of Medicine graduates who have received their complete clinical training in Huntsville have placed with residency programs. All but two out of 68 have matched with one of their preferred residency choices.

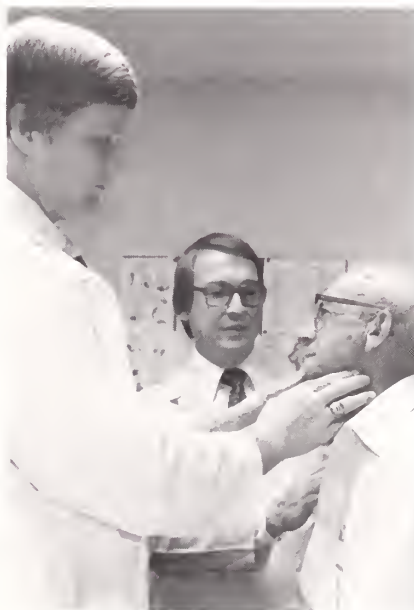


Wayne Melvin, SPMC 1979, assists SPMC family practice faculty member Dr. Michael McCarthy in the examination of a young patient in the SPMC Development Disabilities Clinic.

1978 Survey

A survey conducted in the spring of 1978 provides some evaluation of the SPMC medical student education program beyond these few objective data. The survey questionnaires were sent to all 1976 and 1977 graduates of the University of Alabama School of Medicine who had spent their junior and senior years at the School of Primary Medical Care and to the directors of the residency programs in which these graduates were then enrolled.

The residency directors were asked to compare the SPMC graduates to the other residents in their programs on thirteen different dimensions involving clinical, professional, and interpersonal skills. The SPMC graduates were asked to compare themselves to their fellow residents on the same dimensions. In addition, all were asked to assess the adequacy of their preparation in the core areas of medicine at the time of entry into graduate training.



SPMC Family Practice Advisor Dr. Hunter Daniel discusses a patient's chart with Don Jones, SPMC 1980.

Usable returns were received from 76% of the residency program directors and from 47% of the alumni.

Over 90% of the evaluations from residency program directors rated the skills of SPMC alumni as either above average or average compared to graduates of other medical schools. Over 60% of all responses concerning skills were in the above average categories.

The adequacy of preparation in core areas of medicine was also rated as above average or average in over 90% of the responses. Primary Care area preparation was rated as above average in 56% of the cases; specialty preparation was rated as above average in 45% of the cases.

Responses by alumni parallel those of the program directors with over 90% of all responses being above average or average except specialty preparation which was rated 86% in those categories.

The combined data from both residency program directors and from alumni provide quite positive feedback concerning the clinical, professional, and interpersonal skills of the SPMC graduates and the adequacy of their undergraduate clinical preparation.

For the people of Alabama, who still outnumber the state's primary care physicians by more than 2,000 to 1, a basic question remains: How many of these University of Alabama

School of Medicine graduates who received their undergraduate clinical training at a campus that emphasizes primary care will be practicing in primary care specialties when they have completed their residencies? The prognosis is encouraging; 45 of the 68 SPMC graduates to date chose primary care residencies. Twenty-two of the 45 are in residencies in family practice, 13 in internal medicine, and the rest are in residencies in either pediatrics or obstetrics and gynecology. Every School of Primary Medical Care Senior this June is entering a residency program in family practice, internal medicine, or pediatrics.

As more data becomes available we will continue to report on our progress, our problems, and our successes.

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WARNINGS: If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy.* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children.* Tenuate is not recommended for use in children under 12 years of age.

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ADVERSE REACTIONS: *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

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or just uncomplicated overweight.**

Tenuate[®] Dospan[®] ^{IV} **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

A useful short-term adjunct in an indicated weight loss program.

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

In uncomplicated obesity.

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

Clinical effectiveness.

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.¹ And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."² Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.
And it's responsible medicine.**

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For prescribing information see opposite page.

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600 mg tablets
Motrin[®]
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some of your patients.

Now there are three
Motrin tablet strengths
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J-6999-4

April 1979

Optical Cosmetic Lens

by S. Hutson Hay, M.D.*
and
Mark Kirkland

SUMMARY

The use of optical applications is described to the end of producing, cosmetically, beneficial results in individuals suffering from ocular abnormalities. The use of optical cosmetic lenses is a viable option in the management of these patients without recourse to surgery.

The perception of one's personal appearance is of overriding importance in the day-to-day existence of each of us, as well as our patients. The ocular configuration determines one's initial appraisal perhaps more than any other single aspect of the facial architecture.

Simple observation demonstrates to us the extreme importance that society places on the appearance of the eyes. The optical companies have made fortunes and have produced innumerable types of optical apparatus to tap this source of

self perception. Contact lenses, soft lenses and various designed and colored spectacles are seen in ever-increasing abundance throughout the nation.

Physicians, including most ophthalmologists, usually consider spectacle correction for the improvement of visual acuity only. There is an additional use of optical lenses available for a small, but significant number of patients seen in an average ophthalmologic practice.

These lenses are not used for optical correction of visual acuity, but rather for the optical correction of defects in the cosmetic architecture of the eye and its adnexa. In these patients, the defects usually involve a non-seeing eye or small angles of esodeviation or diplopia and provide an avenue for the improved cosmesis of a patient without having to resort to surgical intervention.

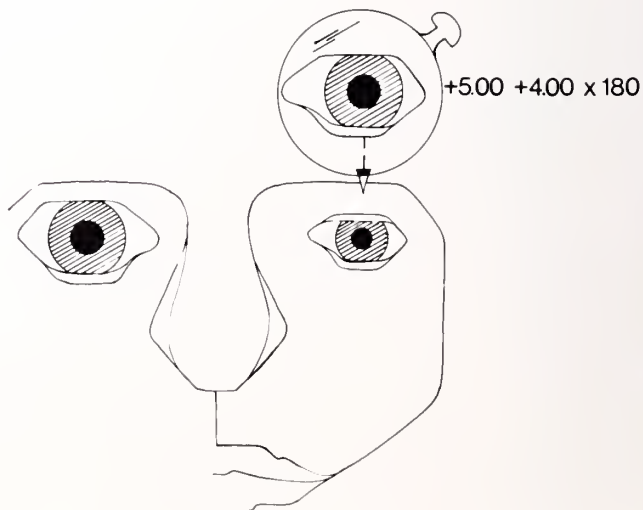
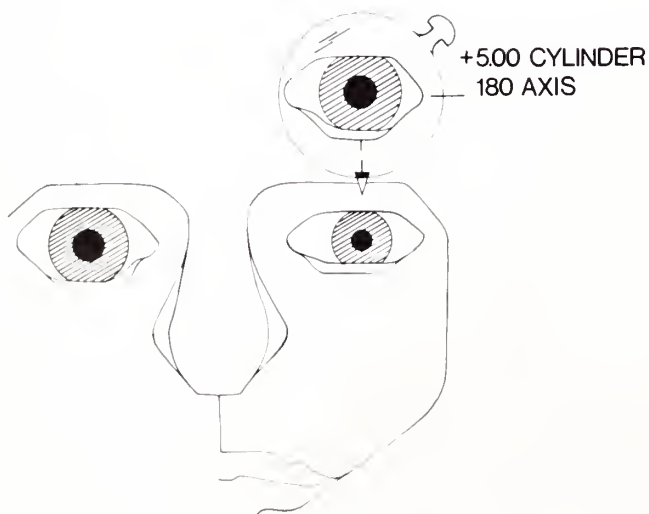
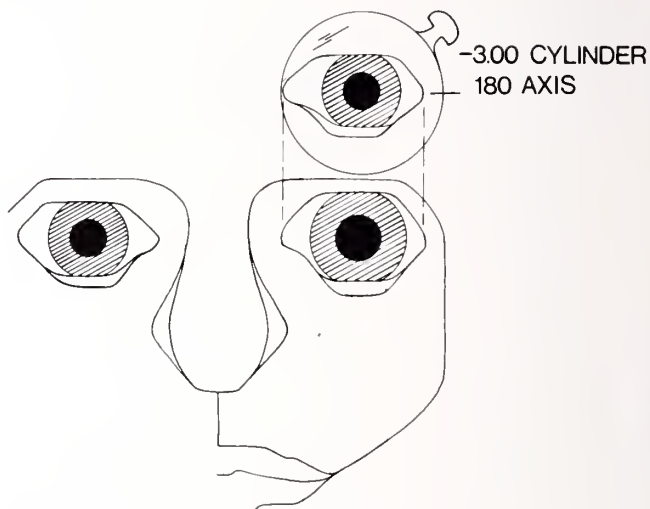
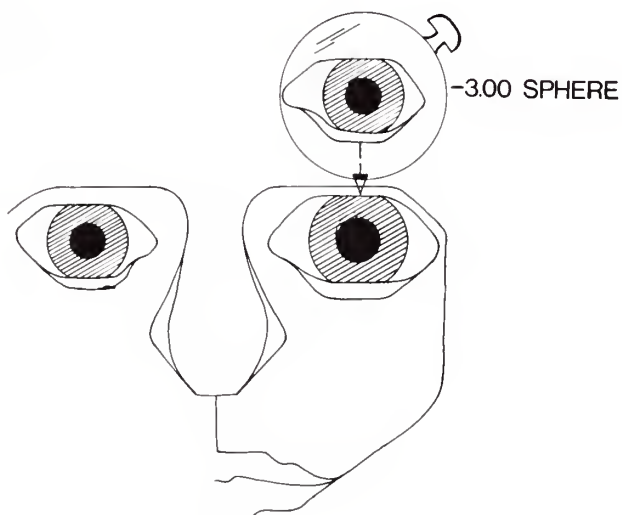
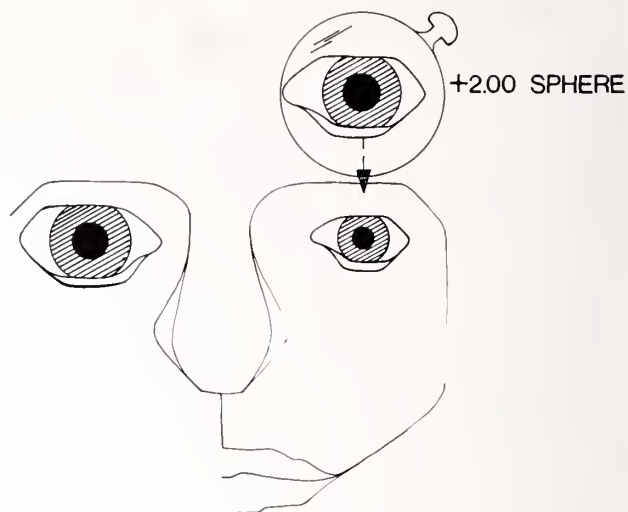
Correction of Inequality of Globe Size Between a Blind Eye or Prosthetic Eye and Its Fellow

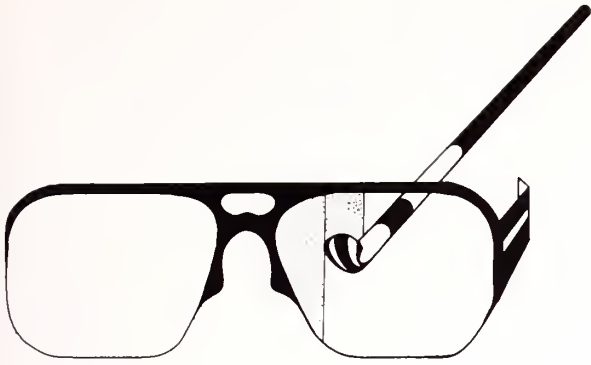
By using a plus or a negative sphere of appropriate power over the blind eye, the ophthalmologist is able to magnify or minify the size of this affected eye to make it match the fellow. The cylindrical plus or minus lenses may also be used to increase or decrease the size of an eye in a

*Volunteer Faculty
University of Alabama, Huntsville
School of Primary Medical Care

horizontal or vertical meridian. The improvement is found not only in the apparent size of the ocular structures, but also in the interpalpebral fissures and surrounding adnexa.

The technique for determining the proper power and type of lenses, either sphere, cylinder, or a combination of such, is simply to place trial frames on the individual involved and then begin adding plus or minus sphere until the overall dimensions of that eye in question are roughly those of the sound eye. A similar modification technique using plus or minus cylinder is then made to increase or decrease specific meridians of the misshapen eye. The end point is found when the observer sees that eye in question behind the lens to be identical with the normal eye on the other side.



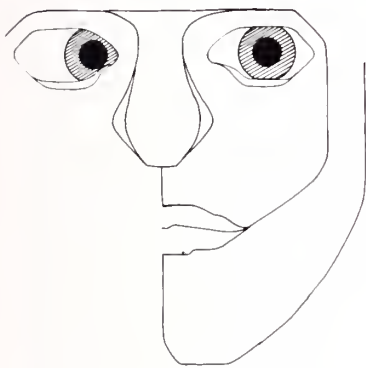


The Management of Certain Cases of Diplopia Without Patching

Diplopia in those patients having cranial nerve damage or some other reasons for intractable diplopia, should they desire not to be managed surgically or by prisms, can be alleviated by painting the back of one lens of their spectacles with clear finger nail polish. This frequently is sufficient to blur the image and thereby reduce the degree of diplopia, as well as permitting the eye to



be observed through the spectacle apparently normal. Many times this simple device is successful in management without recourse to a patch, and at a significant cosmetic improvement.



The Alignment of a Non-Seeing Eye by Optical Control of the Fixing Eye

The deviation of a non-seeing eye is a common occurrence whether it is secondary to disease or to trauma. In the young, the deviation is frequently to esotropia; however, one occasionally sees an exotropia. Under particular circumstances in youth, it is possible to control the alignment of this blind eye. Altering the accommodative-convergence synkinesis of the sound eye by using plus or minus sphere is the method by which this is done.

If there is an esotropia of the blind eye and the cycloplegic refraction of the seeing eye demonstrates a hypermetropia, then a complete correction of this hypermetropia may reduce the deviation of the blind eye. Similarly, a child with an exotropia of a blind eye may be helped by alteration of the accommodative-convergence synkinesis using an "over minus lens" in front of the seeing eye and in this manner draw the non-seeing eye in, improving the cosmetic alignment without recourse to surgery.

Continued on page 20

V-Cillin K[®]

penicillin V potassium

is the most
widely prescribed
brand of oral penicillin



Tablets
125, 250, and 500 mg*
Oral Solution
125 and 250 mg*/5 ml

V-Cillin K^{*}
penicillin V potassium

Description: V-Cillin K is the potassium salt of penicillin V. This chemically improved form combines acid stability with immediate solubility and rapid absorption.

Indications: For the treatment of mild to moderately severe pneumococcal respiratory tract infections and mild staphylococcal skin and soft-tissue infections that are sensitive to penicillin G. See the package literature for other indications.

Contraindication: Previous hypersensitivity to penicillin.

Warnings: Serious, occasionally fatal, anaphylactoid reactions have been reported. Some patients with penicillin hypersensitivity have had severe reactions to a cephalosporin; inquire about penicillin, cephalosporin, or other allergies

before treatment. If an allergic reaction occurs, discontinue the drug and treat with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Precautions: Use with caution in individuals with histories of significant allergies and/or asthma. Do not rely on oral administration in patients with severe illness, nausea, vomiting, gastric dilatation, cardiospasm, or intestinal hypermotility. Occasional patients will not absorb therapeutic amounts given orally. In streptococcal infections, treat until the organism is eliminated (minimum of ten days). With prolonged use, nonsusceptible organisms, including fungi, may overgrow; treat superinfection appropriately.

Adverse Reactions: Hypersensitivity, including fatal anaphylaxis. Nausea, vomiting, epigastric distress, diarrhea, and black, hairy tongue. Skin eruptions, urticaria, reactions resembling serum sickness (including chills, edema, arthralgia, prostration), laryngeal edema, fever, and eosinophilia. Infrequent hemolytic anemia, leukopenia, thrombocytopenia, neuropathy, and nephropathy, usually with high doses of parenteral penicillin. (102175)

***Equivalent to penicillin V.**

Additional information available to the profession on request.



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When the indications surface...

Net wt 1 oz

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(approx)



NEOSPORIN® Ointment

(Polymyxin B-Bacitracin-Neomycin)



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Each gram contains: Neosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically, (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyoderma (impetigo, ecthyma, sycosis vulgaris, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. Prophylactically, the

ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control

secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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able to do more...**



with symptomatic relief of moderate anxiety with depression

Rapid relief of the symptoms of moderate anxiety in many patients

The tranquilizer component alleviates symptoms of anxiety and agitation within a few days, without apparent dulling of mental acuity. Hypnotic effects from the tranquilizer component appear to be minimal, particularly in patients permitted to remain active. However, TRIAVIL may impair mental and/or physical abilities required for the performance of hazardous tasks.

Highly effective antidepressant action

The antidepressant component relieves symptoms of depression such as poor concentration and feelings of hopelessness as well as early morning awakening; adequate relief of symptoms may take a few weeks or even longer.

Increased activity potential often results from symptomatic relief

As the symptoms of anxiety and depression respond to TRIAVIL, many patients may show renewed interest in family and recreational activities and are able to function more effectively at work.

More prescribing convenience

For optimal flexibility there are now five tablet strengths of TRIAVIL for ease of dosage adjustment. For initial management of patients with moderate anxiety and depression, one TRIAVIL® 2-25, containing 2 mg perphenazine and 25 mg amitriptyline HCl, t.i.d. may often be adequate. TRIAVIL® 4-50, containing 4 mg perphenazine and 50 mg amitriptyline HCl, provides b.i.d. convenience for those patients needing the larger total daily dose of 8 mg perphenazine and 100 mg amitriptyline HCl as initial or maintenance therapy.

Treatment with TRIAVIL—a balanced view:

TRIAVIL is contraindicated in CNS depression from drugs, in the presence of evidence of bone marrow depression, and in patients hypersensitive to phenothiazines or amitriptyline. It should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. TRIAVIL may impair mental and/or physical abilities required for performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to overdosage of other drugs or mask other disorders. The possibility of suicide in depressed patients remains until significant remission occurs. Such patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

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*Please see following page
for a brief summary
of prescribing information.*

For moderate
anxiety with depression
dual-action
Triavil®
containing perphenazine and amitriptyline HCl

More dosage strengths
than any other formulation containing
a tranquilizer and an antidepressant

Dual-action Triavil®

containing perphenazine and amitriptyline HCl

Available:

TRIAVIL® 2-25: Each tablet contains
2 mg perphenazine and 25 mg amitriptyline HCl.
TRIAVIL® 2-10: Each tablet contains
2 mg perphenazine and 10 mg amitriptyline HCl.
TRIAVIL® 4-50: Each tablet contains
4 mg perphenazine and 50 mg amitriptyline HCl.
TRIAVIL® 4-25: Each tablet contains
4 mg perphenazine and 25 mg amitriptyline HCl.
TRIAVIL® 4-10: Each tablet contains
4 mg perphenazine and 10 mg amitriptyline HCl.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

WARNINGS: TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdosage. Not recommended in children or during pregnancy.

PRECAUTIONS: Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

Perphenazine: Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorus insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

Amitriptyline: In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

ADVERSE REACTIONS: Similar to those reported with either constituent alone.

Perphenazine: Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; cataton-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have also been reported.

Amitriptyline: Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth, blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. **Gastrointestinal:** Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

OVERDOSAGE: All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

J8TR31 (DC6613215)

For more detailed information, consult your MSD Representative or see full Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., INC., West Point, Pa. 19486.

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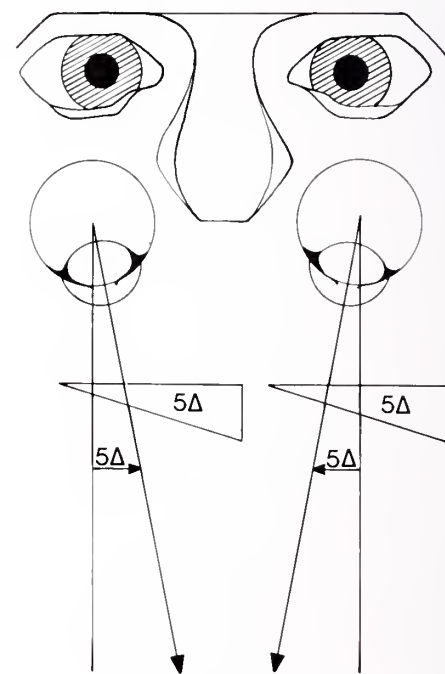
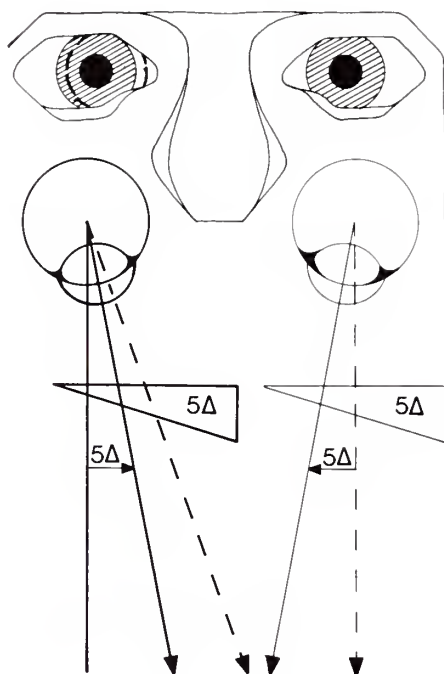
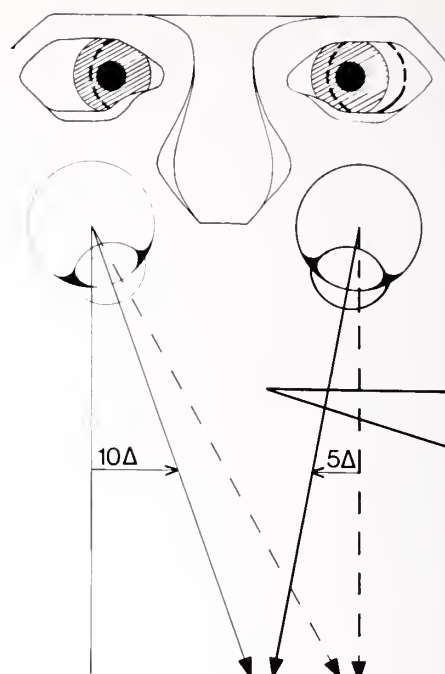
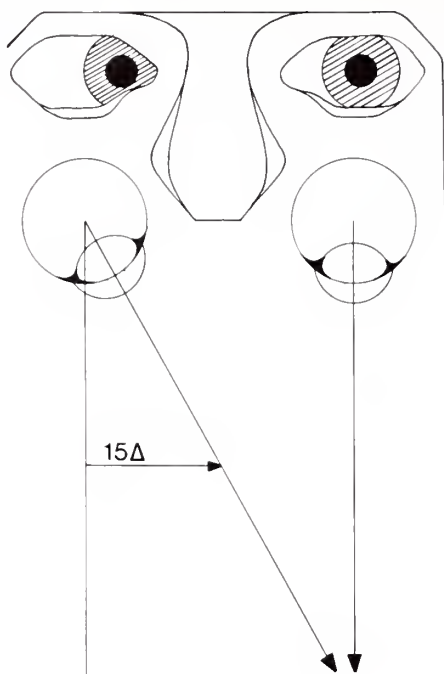
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Prism Management of a Small Angle Esodeviation after a Method Developed by Jampolsky

Those individuals successfully managed by this method cannot have an angle of esodeviation greater than 15 prism diopters. This deviation may be found to be significantly unacceptable cosmetically, but insignificant enough to attack surgically. Using this technique, a base-out prism of five diopters is placed over the fixing eye and a base-in prism of the same amount is placed over the

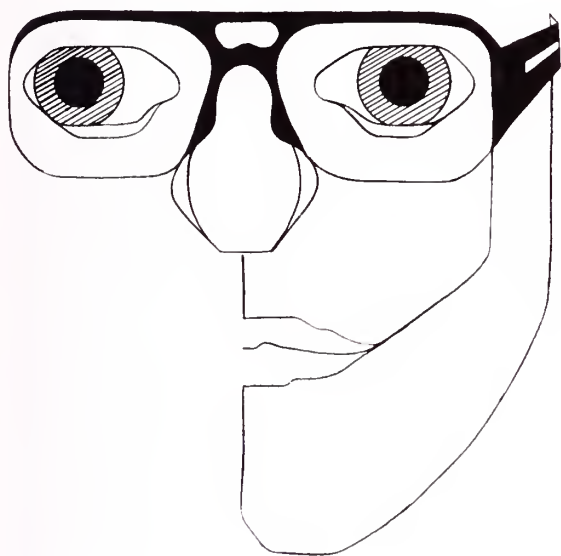
deviating eye. By this procedure, one shifts the fixation of the fixing eye five diopters medially and optically subtracts five prism diopters of the residual eso from the non-fixing eye, and in this manner converts a fifteen diopter esotropia to an improved cosmetically five diopter bilateral esotropia.

This type of optical subtraction, which is very successful in small degrees of esotropia, unfortunately becomes less successful in larger degrees of esotropia and is unsuccessful in the management of exotropia of any degree.

Spectacle Frames

Common observations dictates the size and type of frame employed with an ocular deviation may greatly exaggerate or minimize the deviation. Just as the proper choice of design in clothes tends to camouflage, spectacles do also. Esotropia is exaggerated by large, laterally expansive frames, but this same frame compliments exotropia. The reverse of this rule also holds - i.e., esotropes should wear smaller frames and exotropes larger frames for best cosmetic appearance.

The author would gratefully acknowledge the help and advice of Arthur Jampolsky, M.D., Smith-Kettlewell Institute, San Francisco, California; Melvin Carlson, M.D., Seattle, Washington; and Tom Williams, M.D., Murray, Utah.





**ALCOHOLISM. DEPRESSION. STRESS. DRUG ABUSE.
IS THERE A WAY OUT?
ASK TWO ALABAMA HOSPITALS.**

Two private psychiatric hospitals in Alabama offer individualized, intensive treatment for emotional disorders.

Owned and operated by Charter Medical Corporation, each facility meets the unique needs of the emotionally ill patient through treatment programs for adolescent disorders, addictive diseases, and adult disorders.

Under the direction of staff psychiatrists, a full range of diagnostic, therapeutic and laboratory treatments are offered, with a support staff of nursing, social service, psychology, special education, occupational and recreational therapy.

In addition, a third hospital — in Dothan, Alabama — is now under construction and will open in late 1980.



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PHARMACEUTICAL DIVISION

COMPATIBILITY



Eastern Tiger Swallowtail Butterfly
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Does it influence your choice of a peripheral/cerebral vasodilator*?

Vasodilan—compatible with coexisting diseases (e.g., glaucoma, diabetes)

Vasodilan has not been reported to affect the course of coexisting disease; it has not been reported to affect blood sugar levels or to raise intraocular pressure.

Vasodilan—compatible with concomitant therapy

Vasodilan has not been reported to affect the treatment of coexisting disease; it is compatible with such drugs as hypoglycemics and miotics.

Vasodilan—compatible with your total regimen for vascular insufficiency

Vasodilan can be a valuable adjunct in planning a total therapeutic program for vascular insufficiency.

***Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

Dosage and Administration: Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

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Adverse Reactions: On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

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75th CME Congress

Highlights International Medicine

by George D. Oetting, Ed. D.
Director of Education

A special convocation at the Washington Cathedral served as the impressive opening ceremony for this Congress celebration. Highlights included an academic procession of leading medical educators from around the world, beautiful bell and organ music and the presentation of AMA Medical Education Medals to 11 distinguished educators from China, Canada, Spain, Columbia, Israel, England, Sweden, Japan, and the United States.

Among the Alabamians noted at the meetings were the Drs. Ted and Margaret Klapper, John Packard, David Haigler, and Jim Campbell.

Many of the awards recipients also presented commentary on medical education in their own countries. These are some of the highlights I thought you might find interesting:

Scotland: Ronald H. Girwood, M.D., Dean of the Faculty, University of Edinburgh, historically reviewed the significant influence of the Edinburgh Medical School on American medicine, particularly in the 18th century. Hundreds of American physicians received their medical schooling at Edinburgh; in fact, most doctors serving in the Revolutionary War—on both sides—were trained there. Many American medical students at Edinburgh treated British soldiers brought back from the Colonial War. He further cited the influence of Edinburgh—trained physicians who founded American medical Schools in Philadelphia and New York.

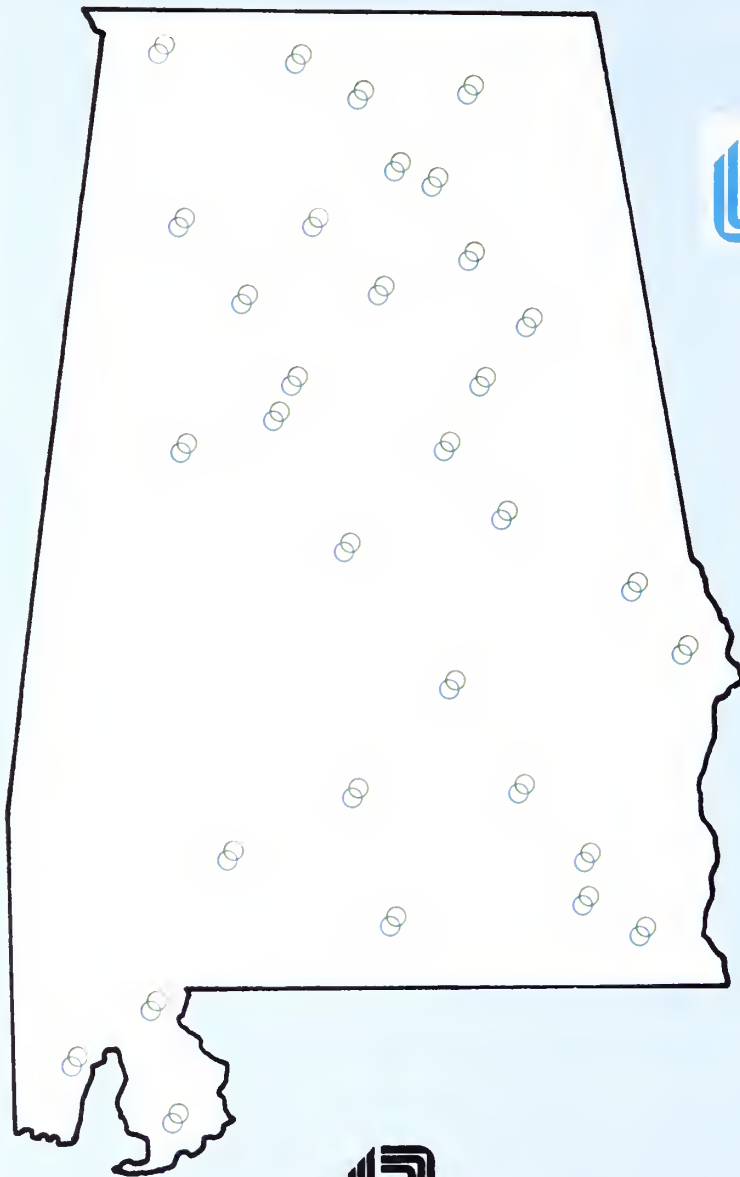
England: Sir George Smart, M.D., Dean Emeritus, University of London, reported considerable growth in the organization of post-graduate medical training—both in specialties and CME updating. Over 300 postgraduate education centers have been established; usually these are situated in a district general hospital, but they are available for use by all health professionals. After the meeting, I asked Sir George if he felt the recent change in the British government would affect the National

Health system. He said that there would be no drastic changes since both parties are committed to this system. He did report that the number of beds available for private patients in hospitals is declining and that now one of the big "perks" given to business executives is private health insurance so they won't have to use the government health care system.

Sweden: Professor Gunnar Strom, M.D., of the University Hospital, Uppsala, related that the Swedish system also is based on a regional concept of health care. MDs, who are the highest paid profession, are hired by the local counties. At present, physicians average 50 hours work per week, and he predicts this may go to 40. Six regional medical faculties teach medical students who come from the top 2% of their university classes. Selectees to Swedish Medical Schools average 29 years old and frequently come from other skilled professions. Things have improved greatly he noted since the early 1860s when teaching hospitals had a strict rule that no more than two patients were allowed in the same bed at any one time.

Columbia: Antonio Ordonez-Plaja, M.D., of Bogotá pointed out a problem not found today, as he discussed the early history of Columbian medical training. Back in 1619 the Pope gave the College of Santo Domingo permission to offer medical teaching—but they had no students! However, the dominant influence on Columbian medicine for many centuries was France—where most medical students were trained. This changed after World War II with the growth of U.S. involvement and assistance to Columbian Medical Schools. Unfortunately, he added that problems arose because everything American was blindly adopted without relating it to local needs.

China: Professor Huang Chia-Ssu, M.D., President of the Chinese Academy of Medicine, divided



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his whole talk into two parts—the sad state of Chinese medicine prior to 1948 and the great strides “since liberation” by the Communists. His statistics certainly do indicate significant strides with the current 116 medical college—at least one in every province. In the current five-year medical school program, the same curriculum and text books are used for all schools. Real efforts are being made to integrate traditional Chinese medicine (particularly the use of herbs) with modern medicine. Ten percent of the curriculum is devoted to this, and there are also 24 colleges of traditional Chinese medicine. Several levels of medical care are offered with the grass roots medicine being offered by 1,800,000 “barefoot doctors” who have been locally trained to diagnose and treat 20-30 common diseases.

Common Trends:

I hesitate to make any generalizations about medical education around the world today, but several trends did seem to be common in many of the presentations.

Most speakers reported a significant growth in the number of medical schools in their countries in

the past few years—both public and private. Two factors were repeatedly cited for this growth—the public demand for more medical care and the tremendous increase in applicants for medical school. Even with additional schools being opened, the competition for selection is tougher now than in the past.

A heightened interest in family medicine rather than exotic specialties was noted, with considerable concern for providing for basic health needs. Training in the technology of medicine did not seem as important as training physicians to really care for their patients. As the Japanese representative summarized, their goal was “to educate and train doctors so as to make them very kind and humane.”

This was, by far, the most interesting and enjoyable Congress I have attended. The program had a different twist with very few of the “feds (HEW, FTC, etc.) are taking over organized medicine” alarmist presentations, usually heard at national meetings. The locale was ideal—so much better than the past February Eskimo conclaves in Chicago. I hope this venue change is permanent.



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The Courage To Change

*"The only thing necessary for the triumph of evil
is for good men to do nothing."*

—Edmund Burke

Remarks Of

George T. C. Way, M.D., President,
Medical Society Of The State Of New York
To The Board Of Trustees Of The
American Medical Association

If you are like me, then you are greatly concerned and somewhat overwhelmed by the onerous pressures, accusations, and obvious campaigns against organized medicine.

If you are like me, you are becoming increasingly concerned about this great country of ours and the direction in which it seems to be drifting — and I use this latter verb in its strictest and most literal sense — for more and more, change in the United States seems to be without the great purpose which contributed so much to this country's founding and earliest years.

And, if you are like me, you are peace-loving, but within yourself you are feeling a growing sense of militancy and a desire for aggressive action.

To understand why medicine is where it is and as to why we are subject to these many pressures, one must understand what is going on in America, for we physicians are deeply immersed in this caldron of confusion.

America, the land of the free — created and repeatedly defended by the brave; conceived and

built by free and independent men and women; a country where the individual was all-important and government was there to serve him; this was the America that made people around the world dream and aspire to become a part thereof. Some died in an effort to get here; many made it. It was a land of unlimited resources and of unlimited potential.

The shoemaker's son, who was destined back home to become a shoemaker because all other avenues were closed to him, could come to America and become almost anything if two conditions were met; firstly, he had to have adequate "smarts" which to me is a God-given attribute; and secondly, he had to get off his "duff" and perform. The sky was really the limit.

In addition, this country was huge and its resources beyond belief. Its potential could only be realized by a dreamer, for only such an individual had the insight and wisdom to sit down and write a Constitution such as ours, one that created a system of checks and balances; that separated state and church so that national conscience and morality would not be subject to governmental law and regulation; and most importantly, a country where individual rights and personal freedom were paramount.

Within this framework of idealism and liberty, a nation grew and prospered with rapidity and success such as the world had never seen before and quite likely will never see again. And yet, we find that many and most of the principles that made this country great are being repudiated by government in an aura of economic and political policies collective growth of our nation.

Discarding The Past

Arthur Krock, who for many years was the chief of the Washington Bureau of *The New York Times*, wrote, "The United States merits the dubious distinction of having discarded its past and its meaning in one of the briefest spans of modern history."

It should not come as a surprise or as sudden news to any of us that there is a loosely cohesive corps of intelligentsia that dwells in ivied halls, government office buildings, bureaus and agencies; that lives and operates with the philosophy that a socialistic and egalitarian government is best for the United States. This is the hidden power in government that must never be subject to the test of the electoral process, while functioning to a large extent without firm control from those whom we choose as our leaders. We are seeing an example of the power of this hidden group with President Carter today.

Mr. Carter has been a most ineffective President. Much of his inability to perform has been that some of his ideas have been totally unacceptable to this hidden power in government. Most outstanding were his plans for reorganization of the administrative branch of the Federal Government and the elimination of the many abuses in the Civil Service System. These were not wanted, and the President with all the prestige of his office could not effect these changes.

Milton Friedman, perhaps the most outstanding economist in America today, now retired, a Nobel Laureate, currently a not too quiet citizen of Vermont and California, and yet a new and recent consultant to the President, and a very knowledgeable columnist at *Newsweek* magazine, has eloquently voiced the problem.

"The view that if there is a problem, if there is something wrong, the way to deal with it is to pass a law, set up a governmental agency (staffed of course by the intellectuals urging this solution) and use the police power of the state to correct it, is a superficially appealing view.

"On the other hand, the view that the government is the problem, not the cure, and that the invisible hand of private cooperation through the market is far more effective than the visible hand of government, is a sophisticated, subtle view that is far harder to get across."

So we find ourselves today in the circumstances where 40% of the total national income is spent to run all forms of government and 20% of all employed people work for the government.

Woodrow Wilson, a most intellectual President, said, "Liberty has never come from the government. . . The history of liberty is the history of the

limitation of governmental power, not the increase of it."

We are now faced with the concept of limited resources in America, be it either gasoline or finite funds for health care. Milton Friedman has summed this up very well by saying:

"We've always had a finite amount of energy. . . We had finite supplies of wood in the early pioneer days. How did we make the transition from using wood to using coal, from using coal to using oil, from using oil to using natural gas? How in God's name did we make that transition without a Federal Energy Agency?"

Too Much Government

I must call your attention to a most significant book, and strongly urge that each member of this House read it: "A TIME FOR TRUTH" by William E. Simon, former Secretary of the Treasury.

In this book Mr. Simon points out that individual liberty and freedom are rapidly disappearing in this country because of too much government. He also points out that the greatest ills and problems facing this country have been created by governmental meddling. But, most importantly, he accentuates the fact that experience has shown that as soon as a country falls into the trap of governmental intervention in the aspects of everyday life, the economic growth and status of that country rapidly wanes.

A study of history will note that certain things usually take place in a country as personal liberty disappears. One is an onslaught on the medical and legal professions, and another is the downgrading and muzzling of the press.

We are all aware of the attacks on medicine. Were you surprised at the President's attack on the legal profession? Did you have the same transitory feeling as I that it was about time that someone found fault with all those damned lawyers? But, did you after that initial feeling reflect that perhaps this attack was all part of the plan?

Ah, and there's the press whom I have come to respect more and more during the last years. Ever since the days of Watergate with deceit, overriding of civil liberties, cover-up, lying, hate lists, bribery, outright felonies by many of those in the highest places, there was a time when I felt that all was lost. But the system worked, and many of these inequities became known. But the system worked, not because of government, but because of a free press!

Just lately, the press is beginning to feel the pressures of power to limit their freedom: court decisions allowing intrusion, search, and seizure



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without warrant, and reporters jailed because they refused to divulge sources of information.

These are dangerous times, and I quote William Simon as follows:

"Freedom is strangely ephemeral. It is something like breathing; one only becomes acutely aware of its importance when one is choking. Similarly, it is only when one confronts political tyranny that one really grasps the meaning and importance of freedom. Freedom is difficult to understand because it isn't a presence but an absence — an absence of governmental restraint."

It is in this confused and trying country of ours that medicine is struggling and groping, perhaps trying to define and redefine its proper role.

Materialist Amenition

Mr. Aleksandr Solzhenitsyn, an exiled prophet from our supposed enemies, spoke at Harvard, decrying the materialism and immediacy that seem to imbue all Americans. He pleaded for a return to the moral and ethical qualities of idealism and goals that motivated our early ancestors. Perhaps he was speaking to medicine.

The history of medicine has always been that of self-discipline and of a performance in the care of our patients far above that required by legal definition and licensure. We call upon every physician to continue to perform and manage his medical practice with the same high ethical and moral guidelines to which he subscribed when he entered this profession.

Cockeyed Concepts

And along with this dedication we must also face up to the local and immediate problems of our members and the health of the citizens of these United States.

Those of us in New York State have the dubious honor of practicing in the field laboratory with all the new cockeyed concepts in the modification of the delivery of health services. Only recently has the AMA begun to realize that the problems of organized medicine in New York are the problems of the other states two years hence.

All the shortcomings of the federal government exist in New York State.

Whereas Washington is still pondering a cap on hospital costs, we already have it in New York. Where else but in New York State was \$565 million removed from the health system in 1977 with the result that two-thirds of our acute care hospitals are on the verge of bankruptcy?

Where else but in New York State has the State Health Department been decimated in the name of planning from what was a premiere and top-trade organization to one infiltrated by 352 accountants,

who are now making health decisions on the basis of dollar signs?

Where else but in New York State are considerations being seriously given to the regulation of office and private practice? The hospitals in our state must report to, and be subject to inspection by, some 162 various regulatory and accrediting bodies. Can you imagine similar mechanisms applied to the office of the private practitioner!

Along with all this we have the problems of membership, of continuing medical liability, of cost control, of attempts by government to ration medical care, of hospital-physician relationships, and lastly of communication, which in itself is no mean achievement.

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It would be disastrous and short-sighted indeed if the efforts of organized medicine were restricted to the solution of day-to-day problems alone.

We in medicine have a far greater concern for our citizens and for our country, and we must sit down with responsible leaders of the press, of the legal profession, and of business, in public forum, to assess the role of government and its direction in the future of America.

The Medical Society of the State of New York is recommending to the American Medical Association that a public forum be so instituted. Such an undertaking will demand courage, it will take money, and, most of all, it will take much abuse. It is indeed worth all of that.

Any institution, such as the medical profession, which is vital to the welfare and wellbeing of our people, can expect to be under fire and pressure from all sides. The greater our role in society, the more we will be in the spotlight.

So I say to all of you who are deeply involved in organized medicine: Stop feeling defensive; cast out your paranoia; discard your feelings of inadequacy and ineptitude. You enjoy the respect and admiration of the American people and you will continue to merit that esteem as long as you meet two criteria: One, that you continue to practice the highest level of medical care; and two, that you continue to show concern and empathy for the individual patient.

But you must ever be aware that high esteem with concomitant power confers upon the medical profession ever greater responsibility.

Passivity Is Dangerous

You must not sit back passively and allow others to create and enact decisions. You have talent and you have skill. You should make positive propositions, not only in the delivery of health care, but in association with the above mentioned groups, in all areas that affect the lives of American citizens.

You should be concerned with energy, with individual freedom, with unbalanced budgets, and with inefficient and costly government, as well as the attempt to ration health services and their burdening costs. You should be creative, innovative, and still practical. You should ally yourselves with those outside of medicine, those who care and who are concerned.

Today in Washington, right now, a telephone conversation is taking place. Each of the two parties is congratulating the other about what is happening in organized medicine.

Who are these parties? One is Senator Kennedy and the other is Mr. Califano; and both are smiling. For suddenly within the united and ever powerful and increasingly effective coalition of diversified medical organization a major crack of contention has appeared. It was more than they ever had dared to hope. It is reminiscent of Great Britain.

Perhaps errors in judgment have been made. I don't know.

Perhaps the leaders in the various organizations have lacked courage or have been brash. I don't know.

Perhaps these same individuals have received poor advice. I don't know that either.

But there are some things that I do know.

First of all, I know that name-calling and finger-pointing is not going to solve our problem.

And secondly, I know that an extramural means for the solution of our problem, namely the courtroom, or the judicial branch of government, is the last place where we should seek a solution. This would create a cancer in organized medicine that would grow and never heal.

The solution must be here and it must be during this session of the House.

I, therefore, would like to paraphrase the prayer of AL ANON, whose members lead trying and frustrating lives —

To the members of this House:

"May God grant us the serenity to accept the things we cannot change. May God grant the members of this House the courage to change those things we can. May God grant the members of this House, the wisdom to know the difference."

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Evaluation of Clotting Disorders

Man-Chiu Poon, M.D.*

Hemostasis can be broadly defined as the arrest of bleeding. When a blood vessel is disrupted, hemostasis is accomplished by a series of events. Initially, platelets adhere to collagen or other subendothelial tissue components. This interaction causes the platelets to undergo release reaction which stimulates further release reaction and aggregation of other platelets. These processes are further augmented by trace amounts of thrombin generated by the plasma clotting systems through the action of tissue factors liberated from the damaged tissue. The platelet release products include such vasoconstrictive products as serotonin and arachidonic acid metabolite thromboxane A₂ and may cause constriction of the cut vessels^{1,2}. Such platelet accumulation and vascular response results in a temporary (primary) arrest of bleeding. Defects in this phase, because the platelets are decreased in number or are functionally defective, are manifested by a prolongation of bleeding time.

The coagulation mechanism, subsequently activated with the generation of more thrombin, converts fibrinogen to fibrin which becomes stabilized by the action of fibrin stabilizing factor (factor XIII). Several investigators suggest that in vivo the platelets at the site of platelet aggregation and release provide on their surfaces both phospholipids and specific receptor sites for interaction of clotting factors for optimal generation of thrombin. In this environment, the generated thrombin may be protected from their natural inhibitors present in the plasma.^{2,3} The Fibrin-platelet mass constitutes a firm hemostatic plug for permanent arrest of bleeding. This phase of hemostasis is defective in patients with coagulation

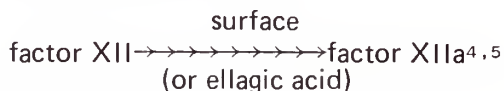
disorders or defective fibrin stabilization. A delayed bleeding following initial hemostasis may occur but the bleeding time will be normal and will serve to differentiate from patients with platelet abnormalities.

The diagnosis of bleeding disorders depends on a careful clinical history and examination, as well as appropriate laboratory analyses. The history and physical examination should establish whether the bleeding is out of proportion to the nature of the trauma, and whether it is of recent onset or lifelong duration. Bleeding of recent onset usually, but not invariably, suggests an acquired disorder. In such instances the physician should look for systemic or local disease, and ingestion of medications that may interfere with hemostasis. Lifelong bleeding diathesis suggests congenital defects, and a family history will be helpful not only in strengthening the impression, but also in establishing the mode of inheritance.

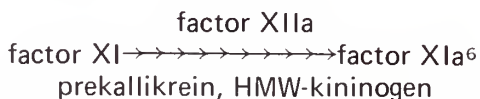
COAGULATION PATHWAYS

The Intrinsic Pathway

Coagulation proceeds by one of two pathways, the intrinsic and extrinsic. The intrinsic pathway consists of a series of enzymatic reactions acting in a waterfall or cascade fashion. In the test tube, activity in this pathway is triggered by the activation of factor XII (Hageman factor), by a negatively charged surface such as glass, kaolin, or celite, or a solution of ellagic acid.



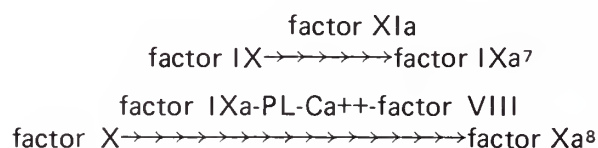
Once activated, factor XIIa acts in concert with prekallikrein (Fletcher factor) and high molecular weight (HMW)-kininogen (Fitzgerald factor) to activate factor XI (Plasma thromboplastin antecedent-PTA).



Calcium is not required in these initial contact-phase reactions, but is required for subsequent steps. In the presence of calcium, factor XIa

*Assistant Professor, Division of Hematology/Oncology, Department of Medicine, University of Alabama, Birmingham, Alabama 35294; Chief, Hematology/Oncology Service and Director, Coagulation Research, Veterans Administration Hospital, Birmingham, Alabama 35233; Hematologist, Alabama State Hemophilia Program, State Crippled Children and Rehabilitation Service, Birmingham, Alabama 35233.

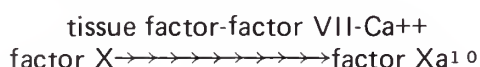
activates factor IX (Christmas factor). The activated factor IXa then forms a complex with calcium, phospholipid (PL) and factor VIII (antihemophilic factor-AHF) and activates factor X.



In this complex, factor VIII probably acts as a cofactor rather than as an enzyme, and its activity is greatly enhanced by the action of trace amounts of thrombin.⁹

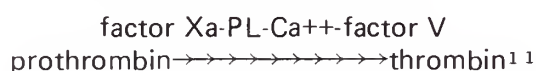
The Extrinsic Pathway

When a small amount of tissue factor is added to plasma, in the presence of calcium, clotting is accelerated. Tissue factor, a lipoprotein found in tissues throughout the body is especially rich in brain, lung and placenta. In the presence of calcium it interacts with factor VII to form a complex which activates factor X.

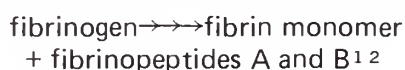


The Common Pathway

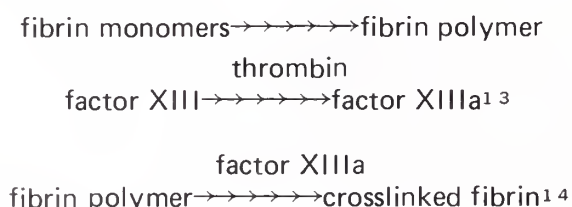
Factor Xa, generated by either the intrinsic or extrinsic pathway, complexes with phospholipid, calcium and factor V (proaccelerin) in a manner analogous to that of factor IXa and proceeds to convert prothrombin to thrombin.



Factor V, which acts as a cofactor rather than an enzyme, is also enhanced by the action of thrombin. Thrombin converts fibrinogen to fibrin, releasing two small fibrinopeptides, A and B.



The fibrin monomers spontaneously aggregate to form a visible clot. They are finally covalently crosslinked to form a stable clot by the action of factor XIII (fibrin stabilizing factor). In this reaction, factor XIII requires prior activation by thrombin.



The intrinsic and the extrinsic pathways are, therefore, intimately linked together by the common pathway. There is also evidence that the activity of factor VII in the extrinsic pathway is enhanced by the action of kallikrein¹⁵ and perhaps also by activated factor XII or its fragments (Hageman factor fragments) and factor IXa¹⁶ generated in the intrinsic pathway.

LABORATORY SCREENING TESTS

Screening tests are available to assess the integrity of the two pathways (Figure 1). The integrity of the intrinsic pathway is assessed by the partial thromboplastin time (PTT).¹⁷ In this test, blood is collected in citrate in order to remove calcium and prevent clotting. The citrated plasma is first incubated with an excess of agents such as kaolin, celite or ellagic acid for optimal activation of the initial contact phase reactions of the intrinsic pathway. The mixture is recalcified in the presence of an optimal amount of phospholipid, and the time for clotting to occur is measured. Although clotting usually occurs within approximately 40 seconds, variations of reagents and techniques result in ranges of normal that must be established locally.

The integrity of the extrinsic pathway is tested by Quick's one-stage prothrombin time (PT),¹⁸ in which tissue factor and calcium are added to the citrated plasma. Clotting usually occurs in 12-13 seconds.

An abnormal PT with normal PTT indicates a functional defect in the extrinsic pathway, whereas an abnormal PTT with a normal PT suggest functional defect(s) in the intrinsic pathway. When both the PT and PTT are prolonged, functional defect(s) of one or more factors along the common pathway and the separate pathways should be suspected (Figure 1).

The presence of factor XIII is not required for either PTT or PT. Clinically, 1% or more of this factor is sufficient for clot stabilization to prevent delayed bleeding. Such a stabilized clot is insoluble in 1% nonochloroacetic acid or 5M urea.¹⁹ Laboratory screening tests for factor XIII are, therefore, done by incubating a formed clot in these agents.

Causes of Abnormal Clotting Tests

A clotting test abnormality indicates either a functional deficiency of clotting factor(s) or the presence of inhibitors directed against the factor(s) along the tested pathways. Functional deficiency involves either single or multiple clotting factors. Single factor deficiency is more suggestive of inherited disorders, whereas multiple factor deficiencies are most frequently acquired defects (Table 1). When single factor deficiency occurs, the PTT or PT is prolonged only if the factor is less than 25% to 30% activity (0.25-0.30 units/ml).

Laboratory Diagnosis of Inherited Coagulation Disorders

Patients with mild inherited coagulation defects may not bleed excessively until a significant hemostatic challenge occurs. Clinical history, therefore, may be misleading. A definitive diagnosis requires the availability of specific factor assays. The assay system for factors in the intrinsic pathway is usually a modification of the PTT. Plasma with a specific factor deficiency has a prolonged PTT which could be corrected to varying degrees by the addition of different dilutions of normal pooled plasma. It is possible to construct a standard curve relating the concentration of normal pooled plasma that is added, to the resulting clotting time. The unknown plasma is tested in the same system, substituting for the normal pooled plasma. The relative titer of the factor concerned could be obtained from the standard curve.

Factors along the extrinsic pathway and the common pathway (except for fibrinogen and factor XIII) are similarly assayed using modified PT systems. The PT and PTT clotting times are not prolonged until the fibrinogen level is less than 100 mg/dl. The concentration of fibrinogen is best assayed by adding excess thrombin to plasma to form a clot, which is then washed and assayed chemically or gravimetrically.²⁰ The screening for factor XIII has been discussed in previous sections.

Except for hemophilia, inherited factor deficiencies are relatively rare (Table 2). Most of the inherited coagulation disorders are inherited in an autosomal recessive manner. Classic hemophilia (functional factor VIII deficiency - hemophilia A) and Christmas disease (functional factor IX deficiency—hemophilia B) are X-linked disorders, whereas von Willebrand's disease is usually an autosomal dominant disorder.

Both classic hemophilia and von Willebrand's disease are characterized by the functional (procoagulant) deficiency of factor VIII. Apart from the different modes of inheritance, the two disorders could be further differentiated as outlined in Table 3. Factor VIII is a multifunctional macromolecular glycoprotein. It supports clotting (procoagulant activity) in the intrinsic pathway, and is precipitated by specific rabbit or goat antisera against factor VIII (factor VIII-like antigen). It is also required for proper platelet functions; it supports the *in vivo* adhesion of platelets to damaged endothelium (failure of which results in prolonged bleeding time), the *in vitro* retention of platelets in a glass bead column, and the aggregation of platelets induced by ristocetin. The patients with classic hemophilia synthesize a normal amount of the factor VIII molecule, but it is defective in procoagulant function. The von

Willebrand's disease patient produces a decreased amount of the functional molecule, thus accounting for the different characteristics outlined in Table 3.²¹

The cause of the disproportional and prolonged rise of factor VIII procoagulant activity in von Willebrand's disease patients following infusion of blood products rich in factor VIII has not been identified. The increasing complexity of the von Willebrand's syndrome is now recognized, and variants with characteristics departing from the usual pattern have been described.²¹ Patients with functional deficiency of factor XII, prekallikrein, and HMW-kininogen have greatly prolonged PTT, but they have no bleeding diathesis.⁶

Recently, a new abnormality, Passovoy factor deficiency, with moderate bleeding diathesis, moderately prolonged PTT, and apparently autosomal dominant inheritance was described.²² A new component of the coagulation system was thought to be missing, but its characteristics have not been established.

ACQUIRED COAGULATION DISORDERS

Defining acquired coagulation disorders requires a careful clinical assessment. The most common acquired disorders are seen in patients with parenchymal liver disease or vitamin K deficiency. Vitamin K is required for the hepatic synthesis of functional prothrombin and factors VII, IX, and X.^{23,24} A reduced intake, with the absence of gut flora which synthesizes vitamin K, is a common cause of vitamin K deficiency in neonates. Similar situations are found in adult patients who are on no oral intake, and who have been treated with antibiotics, as are commonly encountered in the hospital, especially in the setting of intensive care units. The absorption of vitamin K is intimately related to fat absorption; thus, malabsorption syndromes and obstructive jaundice are accompanied by vitamin K deficiency. A common cause, however, is the ingestion of vitamin K antagonists, the coumarin-like drugs.

The liver synthesizes the vitamin K dependent factors, fibrinogen, factors V, XI, XII, and possibly prekallikrein, and HMW-kininogen.²⁵ In the presence of liver disease, some or all of these functional factors may be decreased, but not necessarily to the same degree. One factor that is decreased early is factor V. When the differentiation between parenchymal liver disease and vitamin K deficiency is unclear, the assay of factor V may be helpful. Generally, however, the presence of the appropriate clinical situation and prolonged PT and PTT are sufficient for therapeutic decision without further resort to factor assays.

continued on page 48

APHAT

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In Hypertension

As the hydrochlorothiazide in 'Dyazide' lowers blood pressure, the triamterene component limits potassium loss.

Serum K⁺ and BUN should be checked periodically

particularly in the elderly, diabetics, and those with suspected or confirmed renal insufficiency (see Warnings). If hyperkalemia develops, substitute a thiazide alone.

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

* WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K⁺ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K⁺ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K⁺ frequently; both can cause K⁺ retention and elevated serum K⁺. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Anti-hypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).



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is the presenting
symptom...**



...in the functional bowel/irritable bowel syndrome*

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10 mg. capsules, 20 mg. tablets,

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helps control abnormal motor activity
with minimal anticholinergic side effects[†]

Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

"The correlation of spasm relief and drug given was excellent."

*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964

Merrell

Bentyl[®]

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

CONTRAINDICATIONS: Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

Usual Dosage: Bentyl 10 mg capsule and syrup. **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentyl Injection. **Adults:** 2 ml. (20 mg) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine[®] (bethanechol chloride USP) should be used.

Product Information as of October, 1978

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Ocatator, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

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Conscription For Doctors

The Wall Street Journal

If a United States Senator proposed to conscript all doctors and nurses, subjecting them permanently to Army pay and Army discipline, we assume a few eyebrows would be raised. What national purpose is of such overriding importance as to justify that treatment for a whole class of professional workers?

Senator Kennedy has not quite proposed conscription. But his latest national health scheme does not fall so far short of that. The government would "negotiate"—read it "dictate"—the fees doctors and hospitals could charge. There would be a ceiling on total health care spending. In effect, the health care industry would finally come under the total control of the federal government.

We find it interesting that this plan for economic dictatorship over a selected group of Americans wins such hearty approval from other groups that jealously defend their own economic prerogatives. The UAW, which wants the government to "stay the hell out" of its negotiations with the auto industry this summer, thinks the Kennedy plan is just fine. So does the AFL-CIO, which has just brought suit against President Carter's wage controllers. We hear no cries of protest from the American Civil Liberties Union or "civil rights" groups.

The rationale offered for this ruthless attitude towards medical workers is that health care is different from other economic endeavors. It is a "right" which the state must guarantee its citizens. And the only way the state can guarantee this right is through absolute control of the health care industry.

That is a very facile notion and it plays extremely well from the political stump, where Senator Kennedy has been playing it for all it's worth. But it doesn't stand up well to critical analysis. There are several things more immediately vital to human survival than medical care—food and shelter, for example. But we do not hear demands that the food and housing industries be nationalized.

And even if we assume that medical care is somehow different from other important goods and services what reason is there to believe that nationalization will improve its availability or lower its cost? The evidence indicates otherwise. Canada's provincial health systems, which Senator Kennedy touts as "free" health care, have not reduced health care costs to Canadians appreciably from those U.S. citizens pay. Britain, a poorer country that has tried to scrimp on national health to prevent it from bankrupting the government, has exacted another price from its citizens in the form of long queues for medical care, crumbling medical facilities and a flight of the most able doctors to more hospitable shores. People who want good service and can afford it are returning to private care, which at least is premitted in Britain.

The Kennedy health plan would threaten the U.S. with much the same thing. The human element, so crucial to medical practice and so grossly neglected in technocratic schemes, is subverted by political considerations. The only hope Mr. Kennedy has for containing the costs of his plan is through rigid economic controls. Even at that it would add more billions to the swollen, inflationary federal deficit.

St. Louis Encephalitis Threatened By Rainfall

Notice From The Alabama
Department of Public Health

Spring flooding tends to increase the mosquito population during the summer and fall months. Alabama Department of Public Health officials are concerned that the heavy rains which plagued Alabama during the Spring months will result in a larger than usual mosquito population and increase incidence of St. Louis Encephalitis.

St. Louis Encephalitis is caused by a mosquito-borne group B arbovirus. Man is felt to be an incidental host and the demonstrated reservoir has been found to be birds. However, the presence of reservoirs of St. Louis Encephalitis virus infection in other warm-blooded animals has not yet been ruled out. The vector is the *Culex* mosquito, which is an evening-biting mosquito with wide distribution throughout the State.

Infection with St. Louis Encephalitis virus can cause a wide spectrum of clinical symptoms. The disease can vary from extremely mild to fatal. The disease is more severe in the elderly, with the majority of cases occurring in those over the age of 50. The mortality rate in those over the age of 50 who develop symptoms of encephalitis is believed to be approximately 20 to 25%.

Common presenting signs and symptoms include fever, headache and abnormalities of the central nervous system such as disorientation, tremors, ataxia, paralysis, or coma. Nausea, vomiting and nuchal rigidity are also commonly seen. The presenting picture may sometimes be that of an aseptic meningitis, particularly in the younger patients.

In addition, approximately 25% of cases present with urinary tract symptoms either prior to or concomitant with the encephalitis picture. Because of the central nervous system symptoms, St. Louis Encephalitis is often confused with other neurological entities such as cerebrovascular accidents or delirium tremens. Examination of the spinal fluid is often extremely helpful in making the diagnosis. Spinal fluid examination usually reveals a moderate pleocytosis, 10 to 500 cells, predominantly lymphocytes. The C.S.F. sugar is usually normal and the protein may be normal or mildly elevated.

Definitive diagnosis is made by demonstrating a four-fold or greater rise in antibody titers. However, high titers in the acute serum often occur and can be grounds for a strong presumptive diagnosis. Blood for acute titers should be drawn as soon as the patient is seen. It should be immediately forwarded to the State Laboratory so that virus titers can be performed.

Follow-up convalescent titers should be performed at two weeks and again at one month of six weeks. The importance of these convalescent titers cannot be overemphasized, since it is only by knowing where cases occur that effective mosquito control programs can be planned.

Treatment of St. Louis Encephalitis consists of supportive care and may require extensive respiratory therapy support. Although there is no known cure, those who recover spontaneously usually have no apparent neurological sequelae.

Control of the disease is best accomplished by control of the mosquito vector. While adulticiding (whether by aerial spray or ground spray) has some effect, the most effective means of control of *Culex* mosquitoes is through larviciding. Prevention of mosquito breeding is accomplished by elimination of stagnant water pools. Common breeding sites are often found in old tires, tin cans, at the base of down-spouts, in bird baths and in fish ponds.

Elimination of such objects, where feasible, will greatly reduce the mosquito population. Bird baths should be emptied and cleaned twice per week and breeding in fish ponds may be greatly reduced by stocking the ponds with mosquito-eating fish such as the gambusia minnow. Watering pans for pets should be emptied daily. Where stagnant water pools cannot be eliminated, a thin covering of No. 2 fuel oil with a surfactant may greatly reduce the development of the larvae. Removal of thick brush around drainage ditches and other water pools may help in eliminating resting sites for adults and, therefore, may have some effect in reducing mosquito population.

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the family of antihypertensives completing the therapeutic pyramid

Cost

According to a recent study,¹ Salutensin® (hydroflumethiazide 50 mg./reserpine 0.125 mg.) was the most economical "step two" therapy...about $\frac{1}{3}$ the cost of a day's supply of thiazide + methyldopa or thiazide + propranolol.²

Dosage titration

Salutensin contains the recommended effective doses of both its components, requiring minimal titration.

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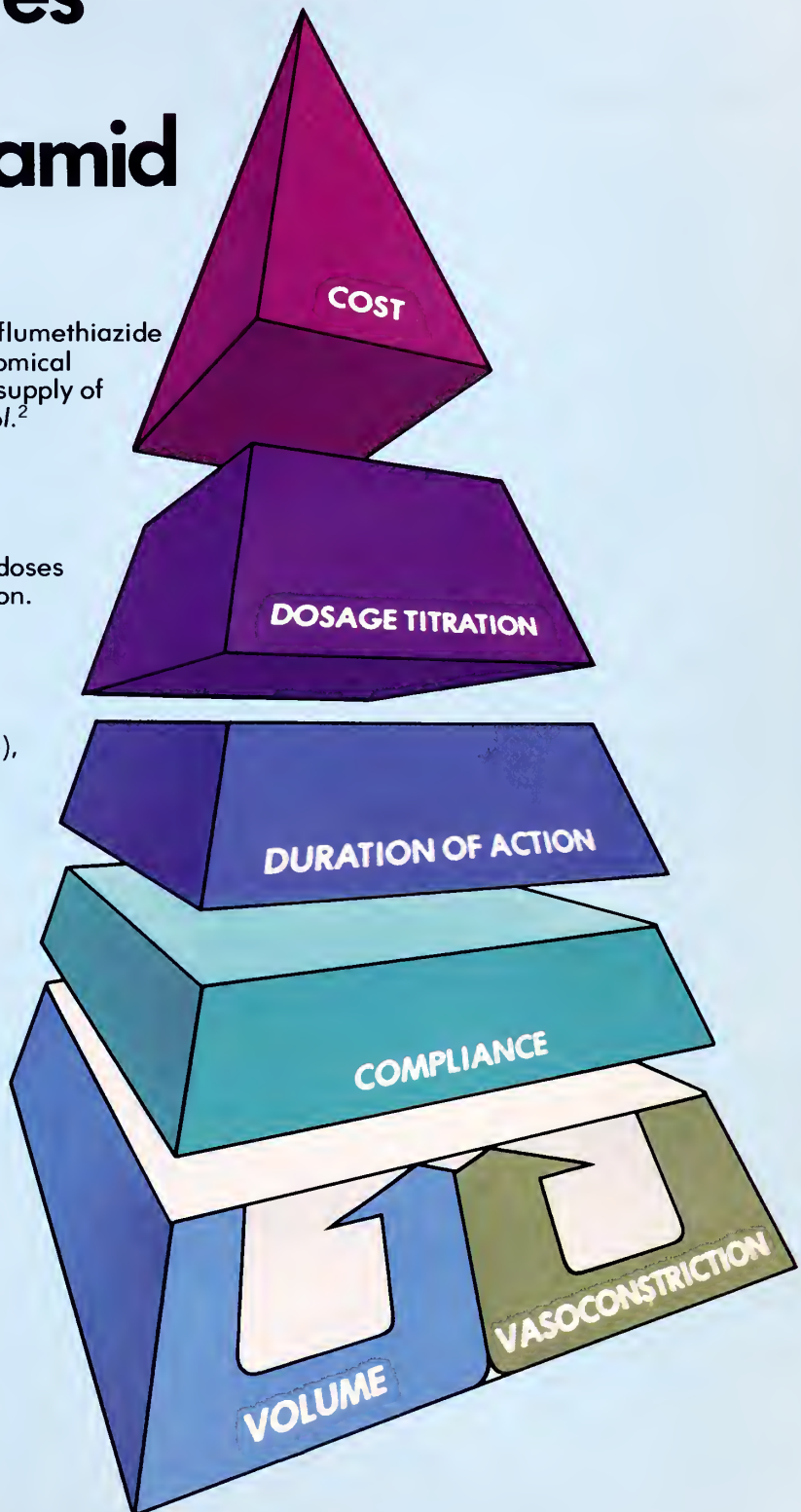
Salutensin contains Saluron (hydroflumethiazide), an intermediate-acting thiazide diuretic, which works over an 18-24 hour period, ideal for once-daily therapy.

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The total daily dose can be given once a day. Compared with multiple-daily-dosage medications, the chance of a missed dose is greatly reduced.

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At the foundation of "step two" hypertension therapy, control of both circulating volume and peripheral resistance can be effectively achieved with the combination tablet Salutensin one day at a time.



References: 1. Finnerty, F.A. et al.: Step 2 Regimens in Hypertension, J.A.M.A. 241:579, 1979.
2. Red Book 1979.

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Saluron®

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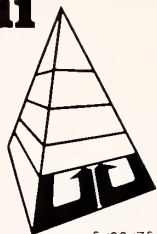
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structured for the long run in "step two" hypertension



5/20/75

Saluron® (hydroflumethiazide)

For complete information consult Official Package Circular.

CONTRAINDICATIONS: Patients with anuria, oliguria, or hypersensitivity to this or other sulfonamide derived drugs.

WARNINGS: Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

Usage in pregnancy: Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

Nursing mothers: Thiazides cross the placental barrier and appear in cord blood and breast milk.

PRECAUTIONS: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arteriolar responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of the therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS:

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

USUAL DOSE: The average adult diuretic dose is 25 to 200 mg. per day.

The average adult antihypertensive dose is 50 to 100 mg. per day. Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

HOW SUPPLIED: Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

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(12) 10/27/78

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

CONTRAINDICATIONS: Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

WARNINGS: Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

Use in pregnancy: Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

PRECAUTIONS: Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being pre-diabetic should be kept under close observation if treated with this agent.

ADVERSE REACTIONS: Hydroflumethiazide: Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

USUAL DOSE: 1 tablet b.i.d.

HOW SUPPLIED: Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

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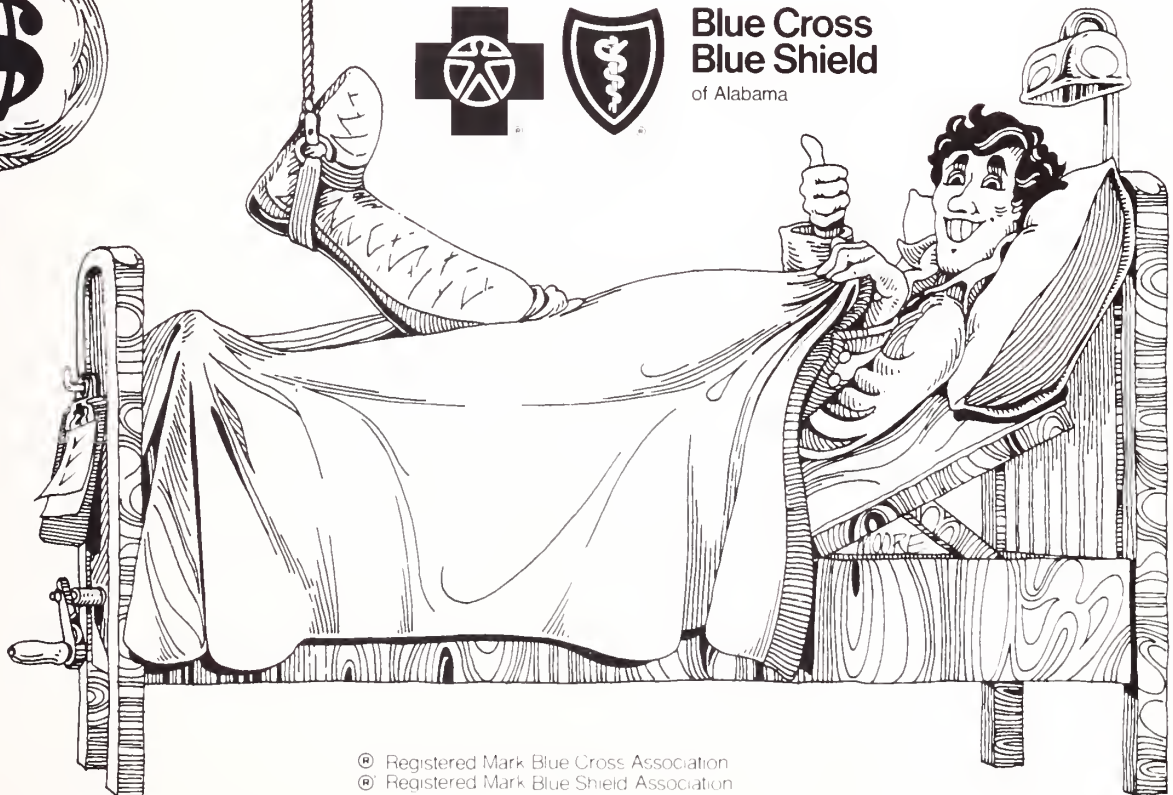
That puts you, as a doctor, and us at Blue Cross in the same boat. We need to work together to stop these duplicate payments.

Our professional relations representatives are available to work with you and your office staff on ways to eliminate payment by more than one health insurance coverage. They can also offer suggestions on other ways we can help hold down health care costs.

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TABLE 1

CAUSES OF ABNORMAL CLOTTING TIMES

1. Functional deficiency of factor(s)
Single vs. multiple
Hereditary vs. acquired
2. Inhibitor (circulating anticoagulants)
Iatrogenic: heparinemia
Inherent: acquired disease process

TABLE 2

INHERITED FACTOR DEFICIENCIES

PATHWAY	FACTOR	MODE OF INHERITANCE ^a	FREQUENCY PER MILLION	PT ^b	PTT ^b
Extrinsic	VII (Proconvertin)	AR	<0.5	†	N
Intrinsic	XII (Hageman factor)	AR	<0.5	N	†
	Prekallikrein (Fletcher factor)	AR	<0.5	N	†
	HMW-Kininogen (Fitzgerald factor)	AR	<0.5	N	†
	XI (Plasma Thromboplastin Antecedent)	AR	~1	N	†
	IX (Christmas factor)	X-linked	15-20	N	†
	VIII (Antihemophilic factor)	X-linked	60-80	N	†
	von Willebrand's disease	AD	5-10	N	†
Common	I (Fibrinogen)	AR	<0.5	†	†
	II (Prothrombin)	AR	<0.5	†	†
	V (Proaccelerin)	AR	<0.5	†	†
	X (Stuart factor)	AR	<0.5	†	†
	XIII (Fibrin stabilizing factor)	AR	<0.5	N	N

^aAR - autosomal recessive

AD - autosomal dominant

^b† - prolonged clotting time

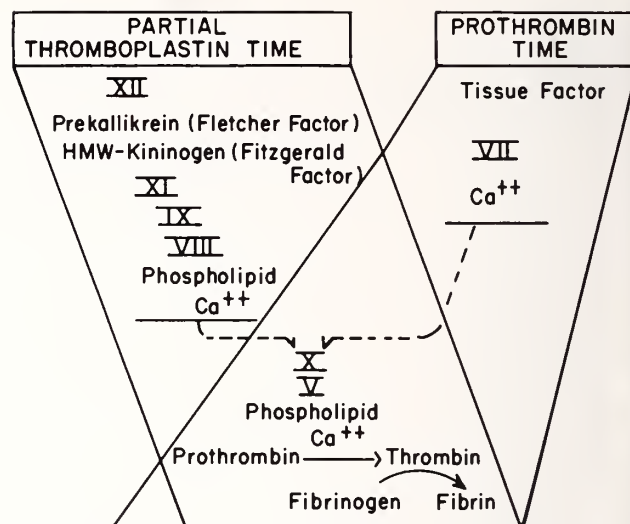
N - normal clotting time

continued from page 37

DISSEMINATED INTRAVASCULAR CLOTTING (DIC)

In this acquired disorder, the clotting mechanisms are activated with the activation of several other endogenous enzyme systems, including the fibrinolytic system.²⁶ The generation of enzymes such as thrombin and plasmin results in the increased turnover rate of hemostatic components such as platelets, fibrinogen, prothrombin, factor V, factor VIII, and factor XIII. Fibrin-fibrinogen breakdown products (fibrin degradation products - FDP) capable of interfering with effective clotting are also generated by plasmin action on fibrinogen and fibrin.²⁷

The coagulation pathways. The integrity of the intrinsic pathway is assessed by the partial thromboplastin time (PTT), and that of extrinsic pathway, prothrombin time (PT).



Depending on the chronicity of the process, DIC may be acute and decompensated, or chronic and compensated with accelerated rate of factor synthesis such that hypocoagulability with factor deficiency are not evident despite the presence of increased turnover of these factors. In DIC, depending on the delicate balance of events, both severe bleeding and thrombosis of vessels in various organs may occur. Common laboratory abnormalities of acute decompensated DIC include thrombocytopenia, red cell fragmentation as evident on peripheral blood film, and prolongation of PT and PTT. The presence of fibrin-fibrinogen breakdown products can be detected by their ability to clump certain strains of staphylococci,²⁸ or immunologically by the hemagglutination inhibition test,²⁹ or the agglutination of antibody-coated latex particles.³⁰ A significant amount of fibrin-fibrinogen breakdown product interferes with clotting of plasma by thrombin. Thrombin clotting time, the clotting time of plasma following the addition of diluted thrombin, becomes prolonged. This test is also sensitive to reduction of fibrinogen, seen also in decompensated DIC. The excess in vivo action of thrombin on fibrinogen results in the formation of soluble fibrin monomers which can be detected by their precipitation in the presence of protamine sulfate.³² Such fibrin monomers may also precipitate upon prolonged incubation in the cold (cryofibrinogen).³²

Many clinical situations could result in this disorder (Table 4). Presence of these clinical situations in the face of bleeding diathesis should cause the physician to suspect DIC. Demonstration of laboratory abnormalities will confirm the impression; however, not all laboratory abnormalities need to be present to make the diagnosis.

ACQUIRED COAGULATION DISORDERS DUE TO THE PRESENCE OF INHIBITORS

Clotting abnormalities due to clotting factor deficiency can usually be corrected by adding an equal volume of normal plasma to the patient's plasma. Such correction will not occur, however, if an inhibitor is present. "Mixing" tests are simple screening procedures for the detection of inhibitors, and further maneuvers may identify their nature.

Heparin in the presence of plasma antithrombin III, is a potent inhibitor of thrombin, factors IXa, Xa, XIa, XIIa, and kallikrein.³³ Its presence results in the prolongation of PT, PTT, and thrombin clotting time. Heparin as a cause of clotting abnormalities is usually apparent clinically; it is confirmed when the abnormalities can be corrected by prior addition to the plasma of a titrated amount of protamine sulfate. Reptilase, an enzyme from a snake venom, unlike thrombin, converts fibrinogen to fibrin even in the presence of heparin.³⁴ Thus, an abnormal thrombin clotting time with normal reptilase clotting time also suggests the presence of heparinemia.

Inherent inhibitors may be directed against specific factors, such as factor VIII. Inhibitors (antibodies) against factor VIII are seen in hemophiliacs who have been transfused with blood products rich in factor VIII. Inhibitors against factor VIII may rarely be seen in nonhemophiliacs, such as postpartum women; elderly persons without underlying disease; patients with certain immunological disorders, such as lupus erythematosus and rheumatoid arthritis; and patients with drug reactions, such as those involving penicillin or diphenylhydantoin.^{35,36} Specific inhibitors against other clotting factors have also been described. The actions of such inhibitors often depend on time and temperature. Precise identification of such inhibitors requires a modification of specific factor assays on incubated mixtures of patients' and normal plasmas.³⁶

Other inherent inhibitors interfere with clotting by interacting with the activated intermediate or the phospholipid components of the clotting pathways. Screening PT, PTT, or both are abnormal. The abnormalities of PT can be further enhanced by the use of diluted tissue factor. Specific factor assays, however, usually reveal no factor deficiency. These so-called "lupus type inhibitors" are seen in about 5% of patients with lupus erythematosus, but are also seen in a variety of other immunologically or nonimmunologically related disorders.³⁷ Unless accompanied by thrombocytopenia or true factor deficiency (notably prothrombin), the presence of such inhibitors are not accompanied by bleeding diathesis.

TABLE 3

DIFFERENTIATION OF CLASSIC HEMOPHILIA FROM CLASSIC VON WILLEBRAND'S DISEASE (vWD)

	CLASSIC HEMOPHILIA	CLASSIC vWD
Factor VIII associated properties		
Procoagulant activity	↓	↓
Antigen	N	↓
*Support of washed platelet aggregation by ristocetin	N	↓
Factor VIII related platelet functions		
Bleeding time	N	↑
Platelet retention by glass bead column	N	↓
Platelet aggregation by ristocetin	N	↓
Post transfusional rise in procoagulant factor VIII	proportional to amount infused	disproportional and prolonged rise
Inheritance	x-linked	autosomal dominant

* Also described as von Willebrand factor (vWF) activity.

N : normal

↑ : prolonged

↓ : decreased

TABLE 4

CAUSES OF DISSEMINATED INTRAVASCULAR CLOTTING

ACUTE:

1. Entrance into blood of thromboplastic material
Obstetrical complications (amniotic fluid embolism, abruptio placentae)

Surgical trauma

Intravascular hemolysis

Promyelocytic leukemia

2. Sepsis
3. Tissue hypoxia - shock
4. Antigen-antibody reactions
Anaphylaxis
Immune hemolysis
Rejection of transplanted organs
5. Miscellaneous
Fat embolism

CHRONIC:

1. Malignant diseases
2. Cirrhosis
3. Cavernous hemangioma
4. Obstetrical complications (retained dead fetus)

References Available Upon Request

The Maker

Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.



MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.

FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were

not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record on drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do no research and may practice minimum quality assurance.

MYTH: Industry favors only "expensive" brand names and denigrates all generics.

FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.

Matters.

MYTH: Generic options almost always exist.

FACT: About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for only 45 percent of such expenditure, is a generic prescribing option available.

MYTH: Generic prescriptions are filled with inexpensive generics, thus saving consumers large sums of money.

FACT: Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically labeled products from known and trusted sources, in the best interest of patients. In most cases the patient receives a proven brand product. Savings from voluntary or mandated generic prescribing are grossly exaggerated.

MYTH: Drugs account for a major portion of the rise in health care costs.

FACT: Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

MYTH: Government intrusions into the marketplace will save tax money.

FACT: Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal “help,” such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.



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Classified Advertising

Classified advertising sells for \$7.50 for 30 words or less plus 20 cents for each additional word, payable in advance. Classified displays sell for \$10.00 per column inch. Ad box numbers can be substituted for formal addresses upon request at a cost of \$2.00. Copy deadline is the 1st of the month preceding issue of publication. Send copy to: Advertising Manager, JOURNAL, P.O. Box 1900-C, Montgomery, Alabama 36104.

ALABAMA: Emergency Physician: Full time, \$70,000 + per year, fee for service, group health insurance, malpractice paid, funded continuing education, 305 bed regional medical center plus 350 bed community hospital and 100 bed community hospital with inhouse and outpatient responsibility. New ED facilities with interns and residents teaching. Contact: Medical Director, AL, Emergency Department, Physicians Medical Group, P.A., P.O. Box 9639, Marina del Rey, CA 90291,, Phone (213) 822-1312.

Outstanding multi-hospital emergency group has excellent opportunities available in Greenville, Mississippi. Fly to Mississippi, work 6-16 shifts, spend the other 20 days in California. Fee-for-service. Malpractice insurance provided. No accounting, billing, or personnel problems. Contact: Garland Holloman, M.D., Delta

Medical Center. 1400 E. Union Street, Greenville, Mississippi 38701 (601) 378-3783 or John Stein, 897 MacArthur Boulevard, San Leandro, California 94577 (415) 638-3979.

PRIMARY CARE PHYSICIANS wanted to locate in West Central Alabama. Rural Health Initiative program has choice of several possible sites with salaries up to \$40,000. Some communities have established clinics. Other communities are willing to build to suit physician. Individual or group practice possible. Salaries for all staff guaranteed until practice is self-supporting. Generous fringe benefits. Write Health Development Corporation, P.O. Box 1486, Tuscaloosa, Alabama 35401, or call Frank Cochran COLLECT 758-7445, evening hours 553-2198.



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Physicians Placement

The Medical Association of the State of Alabama maintains the Physicians' Placement as a service to the medical profession in the state of Alabama. Opportunities for practice in Alabama will be published and will be distributed to physicians making inquiry. Physicians wishing to establish practice are invited to submit a resume to be kept on file with the Association. For further information write: Mr. Emmett Wyatt, Executive Assistant, MASA, P.O. Box 1900-C, Montgomery, Alabama 36104 or call (205) 263-6441.

LOCATIONS WANTED (Physicians interested in locating in Alabama)

FAMILY PRACTICE/GENERAL PREVENTATIVE MEDICINE: Age 43; University of Iowa, 1962; American Board Certified; seeking practice in research, industrial or institutionally based. Available June 1979. LW-16913.

GENERAL PRACTICE/EMERGENCY MEDICINE: Age 49; University of Michigan, 1956; American Board Eligible; seeking practice in multi-specialty, institutionally based or emergency room. Available July 1979. LW-15119.

GENERAL PRACTICE/EMERGENCY MEDICINE: Age 37; CEBU Institute of Medicine, 1968; seeking practice in partnership, solo, industrial or emergency room. Available July 1979. LW-14672.

GENERAL PRACTICE/FAMILY PRACTICE: Age 34; Coms University, 1978; seeking practice in multi-specialty group, partnership or school health. Available July 1979. LW-16564.

GASTROENTEROLOGY/INTERNAL MEDICINE: Age 31; UNC School of Medicine, 1974; American Board Certified; seeking practice in single specialty group, partnership or multi-specialty group. Available July 1979. LW-17708.

INTERNAL MEDICINE: Age 31; Baylor College of Medicine, 1973; American Board Certified; seeking practice in single specialty group, multi-specialty group, industrial, solo, partnership or school health. Available February 1981. LW-16401.

INTERNAL MEDICINE: Age 28; Tulane University, 1976; American Board Eligible; seeking practice solo, partnership or single specialty group. Available August 1979. LW-16164.

INTERNAL MEDICINE/ENDOCRINOLOGY: Age 34; Osmania Medical College, 1969; American Board Eligible; seeking practice in multi-specialty group, institutionally based or single specialty group. Available July 1979. LW-15919.

INTERNAL MEDICINE: Age 30; Duke University, 1975; American Board Eligible; seeking practice in single specialty group, administrative or industrial. Available July 1979. LW-14850.

OBSTETRICS AND GYNECOLOGY: Age 33; Medical College of Georgia, 1972; American Board Eligible; seeking practice in partnership, single specialty group or multi-specialty group. Available June 1979. LW-15227.

OBSTETRICS AND GYNECOLOGY: Age 32; University of Tennessee, 1972; American Board Eligible; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1979. LW-16037.

OPHTHALMOLOGY: Age 32; Kansas, 1974; American Board Eligible in 1980; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1980. LW-16895.

OPHTHALMOLOGY: Age 31; Tulane University, 1974; American Board Eligible; seeking practice in single specialty group, partnership or solo. Available August 1979. LW-11078.

OPHTHALMOLOGY: Age 33; Medical College of Georgia, 1973; American Board Certified; seeking practice in partnership, solo or single specialty group. Available July 1979. LW-15395.

PHYSICIANS WANTED (Opportunities for Practice)

PRIMARY CARE PHYSICIAN—Wanted to serve as Medical Director of a Primary Care Group Practice. Will be a Montgomery, Alabama hospital employee with the opportunity to develop the ideal Primary Care Group Practice. Moving expenses, salary, other fringe benefits. PW-030179.

INTERNIST—Excellent opportunity for association with a multi-specialty clinic in southeast Alabama. Excellent fringe benefits from our professional corporation. Quality schools and churches in the city with good recreational opportunities. PW-09478.

FAMILY PHYSICIAN—Opportunity to establish gratifying practice in Southwest Alabama community of 9,000 with a trade area of 25,000, located within minutes of Mobile and Gulf Beaches. Associations with established family physician possessing well-equipped offices available. Invitation to visit with expenses paid will be directed to those who qualify. PW-26.

GENERAL PRACTICE & O.B.—Opportunity for a general practitioner who will deliver babies. 67 bed hospital is accredited, now has 150 deliveries per year. Town is located in northwestern section of the state; population 5,000 plus 10,000 trade area. Nice, modern office space available. PW-06179.

OPPORTUNITIES FOR GENERAL PRACTITIONERS
Town of 1,000 population; less than 10,000 trade area in Central Alabama; nearest large

PSYCHIATRY/CHILD PSYCHIATRY: Age 35; American Board Eligible; seeking practice in single specialty group, partnership, multi-specialty group or solo. Available August 1979. LW-15639.

RADIOLOGY: Age 32; University of Alabama, 1973; American Board Certified; seeking practice in single specialty group, partnership or institutionally based. Available July 1980. LW-17661.

SURGERY, GENERAL: Age 31; University of Alabama, 1974; American Board Eligible, 1980; seeking practice in single specialty group, partnership or solo. Available August 1980. LW-18156.

SURGERY, GENERAL: Age 46; Tufts University, 1957; American Board Certified; seeking practice in partnership, single specialty group or multi-specialty group. Available July 1979. LW-15954.

city 40 miles—population of 200,000; nearest hospital 20 miles; last physician in town died 12 years ago; equipped three room clinic available with guaranteed salary or option to purchase; principal sources of income in community are manufacturing, forestry products, and farming; 4 churches, 1 school; recreational activities include three area lakes, boating, fishing and hunting. PW-09178.

Town of 1,000 population; trade area 20,000 in Southeast Alabama; nearest large city 165,000 population 35 miles; Principal sources of income in community are farming and lumber industries; 2 churches, 2 schools; social activities include service clubs and country club. Presently all medical services at the family practice clinic are provided by residents of the family practice residency training program on a rotation basis. The clinic is in its third year of operation. The city is seeking a full time physician to serve as director of the clinic through a grant from the National Health Service Corps. PW-02179.

Town of 2,500 population; trade area 50,000; North Alabama; one semi-retired physician in town; one physician died recently; 2 hospitals in town; nearest metro area 40 miles with 785,000 population; two offices available and another one could be constructed; principal sources of income in community are agriculture and light industry; 15 churches, 1 school, 2 kindergartens, 1 day-care center; social activities include service clubs, and golf course. PW-09378.



Mrs. Eugene H. Bradley
President, A-MASA

Developing Our Future Today

I will let you in on a secret! I am operating on the premise that we can make excellent auxiliary officers because we have an extra amount of patience, determination, dedication, capacity to love and the inborn desire to serve humanity.

Of course, I'm prejudiced! With this promise in mind, let's talk about developing our future-today. This begins with self-development and it will be an individual thing with each person in this room today.

This subject is rather like a high powered camera that has a lens which can be focused on a multitude of ways which might be used to develop ourselves as auxiliaries. I am going to call the lens my *Clue*. And I think every one is looking for the clue to Self-Development.

In searching for the Clue, the first thing that we must develop in ourselves is what I call *Courage*. Believe me, it takes courage to accept an office of leadership in our auxiliary. We have to be able to keep a stiff upper lip some times when people unmercifully criticize us or our husband's profession. We need courage to talk to people about preventive medicine. We need courage to try to educate people to accept the responsibility for their own health.

The second letter of the word Clue stands for *Learning*. We need to learn all we can about our Auxiliary and its ideals. We need to know about the medical profession in general so we can intelligently converse with others about its problems and solutions. We need to attend the conferences and workshops that are available to us. We need to learn to manage our time, also. Four important words come to my mind when I talk about managing time and they are: Priorities (put first things first); Procrastination (don't put

off); Perspective (keep your vision straight-ahead not behind you); and Perspiration (work like the dickens to do the first three).

The next letter in Clue represents *Understanding*. We can't stress this enough. I am talking about understanding ourselves and understanding our fellow auxiliaries. In understanding ourselves, we must sit down with ourselves and analyze our conflicts, our strengths and needs. In understanding others, I always think of the Indian prayer which says: "Great Spirit, grant that I may not criticize my neighbor until I have walked a mile in his moccasins." In understanding others, motivation is a key word. I recently heard a speaker give 5 things which motivate people:

- To believe in people
- To listen to people
- To let people make their own decisions
- To have fun with people
- To care for people

These are good motivators and are certainly a vital part of understanding others as well as understanding ourselves better.

The last letter of Clue represents *Enthusiasm*. Enthusiasm is just as contagious as the three-day measles. Wilfred T. Grenfell said: "Real joy comes not from ease or riches or from the praise of men, but from doing something worthwhile." Happiness generates enthusiasm. We should be sold on our Auxiliary and its ideals. Our enthusiasm prompts our growth as Officers and Leaders. It is true that with this enthusiasm we have the nerve to reach out and touch the lives of others so we will have a happier and healthier world around us.

So now we have the Clue to our Self-Development as Auxiliary Leaders. C-Courage; L-Learning; U-Understanding; E-Enthusiasm. This is not

only the clue to our self-development but it is the clue to our success as wives of Physicians and representatives of the Medical Profession. I think I know most of you pretty well and I know that if I give you a Clue to something, nothing will stop you then!

Because of this, I predict a great year ahead of us for AMASA and I also predict a warmth in the Auxiliary as a result of our self-development and the joy of working together for a happier and healthier world. By developing ourselves through service to others we can truly begin Developing Our Future—Today.

The installation of new officers in the Auxiliary neither marks an end of the organization nor does it mark the beginning of the organization. It is merely a step of progress for the Auxiliary. Our Auxiliary has always had good leadership and we have progressed. Our hope, as new officers, is that we will continue to be of assistance to the Medical Association. We want to always represent our husband's profession by serving with other physicians wives to bring information or help to our own community and its needs.

The following were installed with me to serve the year 1979-1980: President-Elect, Mrs. O. B. Carr, Jr., Sylacauga; First Vice-President, Mrs. Rufus Lee, Dothan; Northwest district vice-president, Mrs. Ralph Braund, Sheffield; Northeast district vice-president, Mrs. Andrew Brown, Gadsden; Southwest district vice-president, Mrs. Clifford Pringle, Jr., Mobile; Southeast district vice-president, Mrs. William Lazenby, Opelika; Recording secretary, Mrs. Wallace Frierson, Huntsville, and Treasurer, Mrs. Robert Estock, Birmingham.

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Before prescribing, please consult complete product information, a summary of which follows:

The effectiveness of Valium (diazepam) in long-term use, that is, more than 4 months, has not been assessed by systematic clinical studies. The physician should periodically reassess the usefulness of the drug for the individual patient.

Contraindications: Tablets in children under 6 months of age, known hypersensitivity; acute narrow angle glaucoma, may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: As with most CNS-acting drugs, caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals (drug addicts or alcoholics) under careful surveillance because of predisposition to habituation/dependence.

Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations, as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

ORAL: Advise patients against simultaneous ingestion of alcohol and other CNS depressants.

Not of value in treatment of psychotic patients, should not be employed in lieu of appropriate treatment. When using oral form adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increase in dosage of standard anticonvulsant medication; abrupt withdrawal in such cases may be associated with temporary increase in frequency and/or severity of seizures.

INJECTABLE: To reduce the possibility of venous thrombosis, phlebitis, local irritation, swelling, and, rarely, vascular impairment when used I.V. inject slowly, taking at least one minute for each 5 mg (1 ml) given, do not use small veins, i.e., dorsum of hand or wrist, use extreme care to avoid intra-arterial administration or extravasation. Do not mix or dilute Valium with other solutions or drugs in syringe or infusion flask. If it is not feasible to administer Valium directly I.V., it may be injected slowly through the infusion tubing as close as possible to the vein insertion.

Administer with extreme care to elderly, very ill, those with limited pulmonary reserve because of possibility of apnea and/or cardiac arrest, concomitant use of barbiturates, alcohol or other CNS depressants increases depression with increased risk of apnea, have resuscitative facilities available. When used with narcotic analgesic eliminate or reduce narcotic dosage at least 1/3, administer in small increments. Should not be administered to patients in shock, coma, acute alcoholic intoxication with depression of vital signs.

Has precipitated tonic status epilepticus in patients treated for petit mal status or petit mal variant status.

Withdrawal symptoms (similar to those with barbiturates, alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal/muscle cramps, vomiting, sweating). Keep addiction-prone individuals under careful surveillance because of predisposition to habituation/dependence. Not recommended for OB use.

Efficacy/safety not established in neonates (age 30 days or less); prolonged CNS depression observed. In children, give slowly (up to 0.25 mg/kg over 3 minutes) to avoid apnea or prolonged somnolence, can be repeated after 15 to 30 minutes. If no relief after third administration, appropriate adjunctive therapy is recommended.

Precautions: If combined with other psychotropics or anticonvulsants, carefully consider individual pharmacologic effects—particularly with known compounds which may potentiate action of Valium (diazepam), i.e., phenothiazines, narcotics, barbiturates, MAO inhibitors and antidepressants. Protective measures indicated in highly anxious patients with accompanying depression who may have suicidal tendencies. Observe usual precautions in impaired hepatic function, avoid accumulation in patients with compromised kidney function. Limit oral dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation (initially 2 to 2½ mg once or twice daily, increasing gradually as needed or tolerated).

INJECTABLE: Although promptly controlled, seizures may return, readminister if necessary, not recommended for long-term maintenance therapy. Laryngospasm/increased cough reflex are possible during peroral endoscopic procedures, use topical anesthetic, have necessary countermeasures available. Hypotension or muscular weakness possible, particularly when used with narcotics, barbiturates or alcohol. Use lower doses (2 to 5 mg) for elderly/debilitated.

Adverse Reactions: Side effects most commonly reported were drowsiness, fatigue, ataxia. Infrequently encountered were confusion, constipation, depression, diplopia, dysarthria, headache, hypotension, incontinence, jaundice, changes in libido, nausea, changes in salivation, skin rash, slurred speech, tremor, urinary retention, vertigo, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances and stimulation have been reported, should these occur, discontinue drug.

Because of isolated reports of neutropenia and jaundice, periodic blood counts, liver function tests advisable during long-term therapy. Minor changes in EEG patterns, usually low-voltage fast activity, have been observed in patients during and after Valium (diazepam) therapy and are of no known significance.

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In peroral endoscopic procedures, coughing, depressed respiration, dyspnea, hyperventilation, laryngospasm/pain in throat or chest have been reported.

Management of Overdosage: Manifestations include somnolence, confusion, coma, diminished reflexes. Monitor respiration, pulse, blood pressure, employ general supportive measures, I.V. fluids, adequate airway. Use levetiracetam or metaraminol for hypotension, caffeine and sodium benzoate for CNS-depressive effects. Dialysis is of limited value.

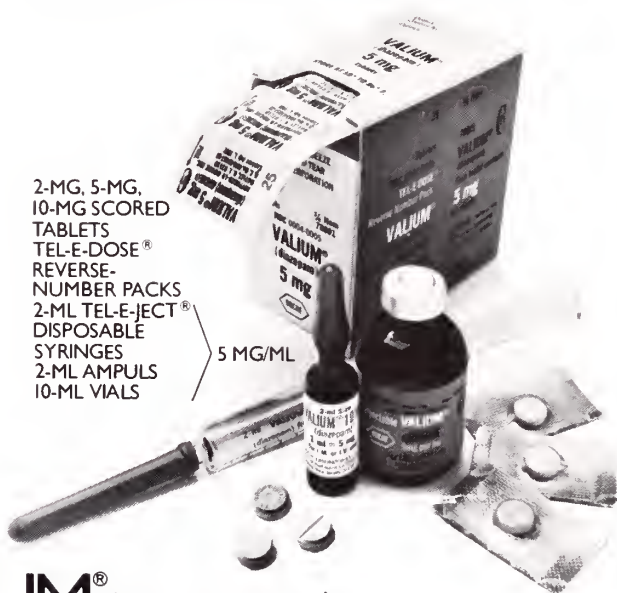
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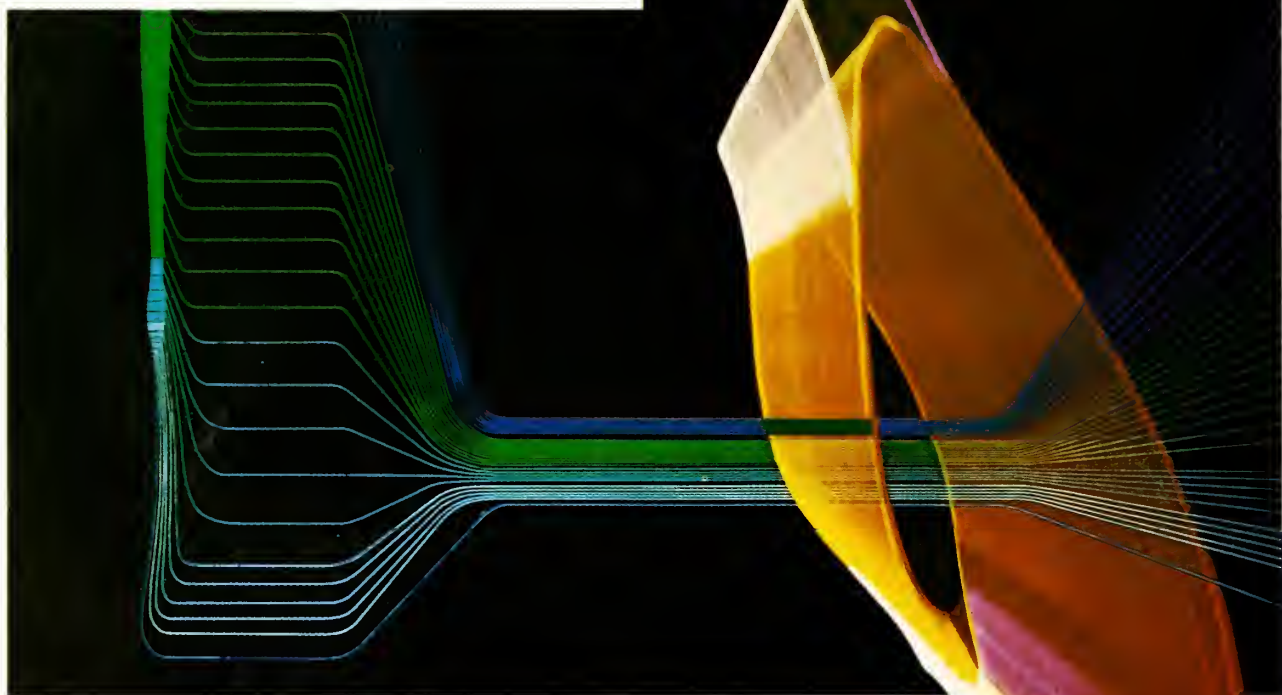
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